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By GORDON BROWNE, R.I.

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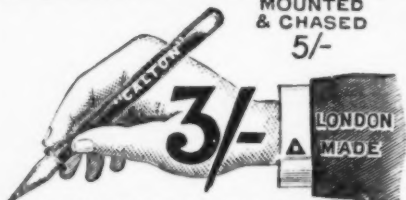
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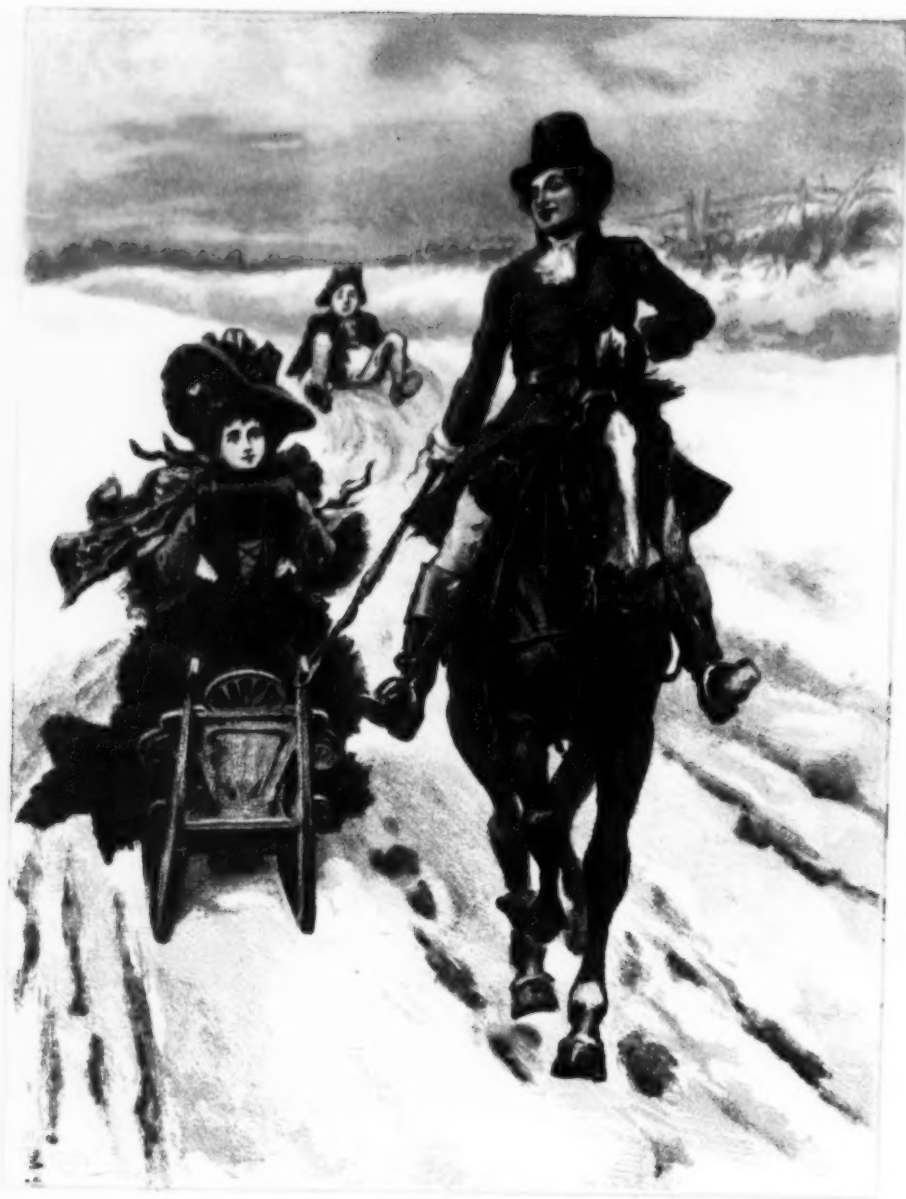
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THE ALABASTER BOX

BY
WALTER BESANT

CHAPTER VII.—THE DROPPED HAND



ERALD left this case in a much better temper. The man was interesting if only for his impudence and swagger. Why on earth, however, should Jem Crozier trouble himself about a common rogue—the worst kind of rogue? For such a case there is but one treatment possible: detectives and the man in blue.

There was the second case recommended by the rent collector. The house she had pointed out was a few doors farther on in the same street: it was a poor squalid place. The door here also stood open: this is an indication of a tenement house—the good tenement needs no door. He went in. First floor front, he was told. The stairs were broken, a good many of the steps had disappeared, the banisters were all gone: they had been broken up long since and used for firewood. The proprietor in such cases refuses to replace the missing links of the stairs, because the tenants must at least leave enough for their daily use. Gerald surmounted these difficulties, and knocked at the door.

There was a faint reply. He pushed open the door, the handle of which was gone, and entered.

The room, like all those in the street, was quite small; there was a cupboard beside the fireplace: it was empty, save for a plate or two. The window was shut, and the air was close, as if the window had not been opened since the night; there was no blind

or curtain; there was no carpet. The whole furniture of the room consisted of a bed with a blanket over it; a single chair; on the hob a kettle; on the mantelshelf a cheap oil lamp, a teapot, and a cup.

On the bed lay a man supine. On the chair sat a woman, her hands clasped over her knee, rocking to and fro. The movement means patience under suffering. An expert would have understood that the room and its occupants spoke of destitution, such as one reads of as occasional—so many deaths of slow starvation in a million—a rare form of the disease called poverty.

The man was advanced in years—between sixty and seventy—bald, save for a few scattered locks over his ears. He was unshaven and white about the chin and cheeks; his face was thin and drawn; the expression, like that of the woman, spoke of endurance and of pain. His right hand was placed in a sling; he was slight in figure, and rather under the middle height.

The woman, apparently older than the man, was clean looking, venerable, neat in her rags: a self-respecting old woman. When Gerald opened the door she looked up with wistful eyes, as if asking whether the goddess Fortune was really about to turn her wheel. This goddess remains to man, even when all the other Olympians seem to have forsaken him. She mocks him, and deludes him, and disappoints him; but still he cleaves to her, and still he worships her, and still he hopes for her smile.

The man opened his eyes, half raised his head, but lay back again, as if the effort was

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too great for him ; and he closed his eyes, as if he was no longer in the least anxious about anything that might happen. Anxiety about the future is only possible when the human animal is fed ; when he is starving, it is only possible to think of the present.

"I was told," said Gerald, beginning to realise that for the first time in his life he was standing in the presence of destitution, "that if I called——" He was unable to finish the sentence ; the sight of this extremity of poverty made him dumb.

"Perhaps you've come with a job," said the old lady. "But his hand dropped again last night."

"What made it drop ? What is the matter with you ?"

"It's painters' palsy."

"How do you live, then ?" he asked bluntly.

The woman looked at the teapot.

"You've got no money ; you can do no work."

"Yes, yes," she cried eagerly. "When his hand is well there's not a better workman anywhere than Burkle."

"But his hand drops. How long are you going to stay here—starving ? Have you no friends—children—relations ? Does nobody come to help you ?"

"His hand will be well again in a day or two. Then he will go out again and get a job. Burkle's that strong——"

"Yes, yes, but meantime."

"Perhaps we shall borrow a bit of something somewhere."

"What have you had to eat to-day ?"

She looked at the teapot again. "Only cold tea ? Nothing else ? This is scandalous. The parish people ought to know."

"Lift me up," said the strong man hoarsely.

His wife raised his head, and he sat up on the bed, his feet on the floor. His free hand trembled and shook. His wife held him up.

"If it's a job——" he said.

"It isn't a job. I've got no work for any one." He looked about the bare room again ; he looked at the couple before him ; the woman supporting the man with her frail arms, her patient face, her self-respectful look. His heart was strangely moved with pity. "Tell me," he said, "have you any prospect at all of getting food for to-day ?"

They made no reply.

"Does the parish give you relief ?"

"No," said the man stoutly. "We are not sunk so low as that."

"Not the parish," the woman added softly, but with equal resolution. "Not the parish."

"Why shouldn't you be on the parish ? Why don't you go to the workhouse and live there and have done with it ?"

"My name, Sir, is Burkle"—the man made an effort, which failed, to rise to his feet in order to emphasise the statement. "In this part of London it is a respected name. I was once—if you'll believe me—a master painter. I had a good business, though you wouldn't think so to look at these lodgings. I was a ratepayer. I might have been a churchwarden if I'd chosen."

"He might, indeed," said the old woman.

"How did you get into such a mess as this, then ?"

"I fell into difficulties, and I borrowed money to pay my way. Then I got behind with my payments, and the money-lender—my own cousin, he was—would give me no more time."

"Made him bankrupt !" the old woman repeated. "His own cousin ! A bad man ! A bad man ! A man without mercy !"

"Well, and then ?" The manner of the man's fall naturally irritated him. Was he always going to hear about money-lenders ? "Go on, can't you ?"

"Then I became a journeyman and worked in the decorative line for the ships—at Millwall. If you want to see splendid work——"

"Splendid," interrupted his wife.

"Go on board and see for yourself."

"And they always respected him," said his wife, "and they always will."

"I've had to give up that work," the man explained, "because of my hand. Now I look about and take what comes."

"Oh ! You wouldn't believe how strong he is," said his wife.

"No Burkle ever yet went to the workhouse," said the man.

"Then, because of your pride—your absurd family pride—you prefer to starve. What is to be done with such people ? What is the use of legislation ?"

"Sir," the man lifted his head and spoke with greater force than might have been expected, "I don't know what your family may be, nor what your pride in it may be. Mine is that we've lived respectable from father to son ; and that we've always died respectable. Lived and died respectable."

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"But," Gerald insisted, "if you can't pay your rent you will have to leave this lodging; and if you can't buy food you must starve in the street. You call that respectable?"

The old woman moaned, and sat down on the bed beside her husband. The man stiffened himself; he almost felt equal to standing up. "I would rather starve in

woman's hand without any remark. Her fingers closed upon it; her lips moved inaudibly; the tears came into her eyes. People half starved are in this respect much like people half drunk—they are easily moved; at such times a little thing touches the fount of tears.

"How long are you going to be disabled?" he asked, with the severity of a



"HOW WOULD YOU LIKE YOUR FOOD WEIGHED FOR YOU?"

the street," he said, "than go into the House."

Gerald put his finger and thumb into his waistcoat pocket. "It is ridiculous," he said. He drew out his finger and thumb. Between them was a yellow coin. He knew that he was doing a wrong thing. Nothing is worse than the giving of doles; the man ought to be in the House or in the Infirmary. He placed this coin in the old

parish officer, as who should say, "Come, now, what do you mean by it?" Bumble himself might have spoken.

"It is uncertain." The old woman spoke for him.

"You talk about the House"—the man was stung into strength. He could not stand, but with his left hand he held a bedpost, while his wife kept him up on the other side. "What do you know? It's

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easy for you to say, why don't you go into the House? You've never seen the House. How would you like to be driven like a flock of sheep? How would you like to have your food weighed for you? How would you like to be set picking oakum, all the same as a gaol bird? How would you like it, if you were nigh upon seventy years of age, to be punished for breaking a rule as if you was a prisoner? How would you like to be bullied by the Master and the Matron, and talked at by the Chaplain and examined by the Guardians?"

"I was thinking of the choice of evils. If you prefer to starve outside, it is your affair, not mine. The laws of the country provide for every case of destitution. No one need suffer. But, of course, if you really like this kind of misery better than the loss of a little imaginary independence——"

"There's worse pains than the pains of hunger." It was the old woman who spoke. "There's worse things to bear than cold; they're in the House, not here."

Gerald looked from one to the other. Perhaps he began to understand that legislation, even with the most beneficent intentions, even like the Poor Law when it tries to make people who are old and poor understand the true wickedness of their condition, may fail and break down before pride and obstinacy.

"Get him some food as quickly as you can," he said, and left them.

Ruined by a money-lender; made bankrupt by a money-lender, a man without mercy, who would give no time. His father's words came back to him: "Trample—trample—trample!" And his father's history, which was always with him day and night, but sometimes stood out more clearly, now rose up before him like a landscape before rain, rose up in his brain like unto the effigy of Fate brandishing the fiery scorpions. Ruined by a money-lender. How many, like this poor man, cursed the money-lender? "How was your fortune made?" asked the voice in his brain.

That morning the fragrance of fried steak returned to the tenement after a long absence. Onions added their incense; potatoes were boiled; porter was fetched; there was a meal—an actual meal. It reminded them of the days of the decorating. The man with his right hand in a sling was able to sit up, and the woman left off clutching her knees, and no more rocked to

and fro; but with a delicious sense of returning housewifery washed up and put away, and crooned an old and long-forgotten tune.

"Old woman," said the man, drowsy with the unwonted feeling of satisfied hunger, "I thought I knew him when he came in; I thought it was my cousin Isaac, young again. He had just that look of him, without the grab and the grasp in his eyes. Afterwards, he didn't look so much like him, but at first—well, I shall get about again in a day or two. Perhaps we shall find out who he is, and when I get into work again we can pay him back."

CHAPTER VIII.—THE LOST SYMBOL

GERALD walked away with quickened step. He was a little ashamed of his weakness. Why had he given anything to the man? There was the machinery of the law; there were the parish officers; there was the workhouse. There is no greater folly than to relieve in this casual fashion without inquiry. Yet there they were with a teapot—and nothing else. Why could not these people pocket their ridiculous pride and go into the workhouse, provided for such cases as theirs? The union for paupers and the old and impotent; and for the rogue, such as that Impenitent One, prison—the good old refuge—the only remedy. With this remedy and this refuge the poor should be left to themselves; to shape themselves according to their own necessities.

In this way he put the case to himself; but without complete satisfaction. For such a man as the Impenitent was certainly a danger to the State, and under existing conditions he cannot be locked up for life, as he should be. And as for the second man, he was unfortunate; it is hard, on account of misfortune, to sink so low. On the other hand, one cannot avert misfortune; it falls upon all classes of people, rich and poor alike. His own father's wealth did not avert the paralysis which first crippled him and then killed him.

The street led him into a small triangular place, one side of which was occupied by a little grassy enclosure containing two trees, three square tombs, one headstone, three or four graves, and a cottage of four rooms. The thing was so unexpected and so remarkable that he stopped to look at it. The little burial ground belonged to a humble chapel, and the chapel had been

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converted into a small house, and what were the tenets of the extinct sect only the dead lying in that enclosure knew.

This halt before the railings was the cause of a discovery—an important discovery, though extremely disagreeable. For next to this little cemetery there stood a small shop belonging to a house with a stuccoed front. Over the front of the house ran an inscription, at the sight of which this young man started and changed colour. For it was the last thing which he looked for; the thing which he might have feared, but did not. It was the unexpected, that which always happens.

“George Nobes, Builder and Decorator; Plumbing in all its Branches; Undertaker and Funeral Contractor on Easy terms. Successor to Isaac Moorsom. Established 1855.”

He read the legend. He then remembered for the first time that he was walking about in the very quarter in which his father had commenced his career: it was here that the Day of Small Things had been successfully encountered; here that the tenements were acquired; here that the rents—the first *coup*—the first real step—were doubled.

“I began,” said his father, “as a builder in a small way.”

It was here, then. This was his place.

The shop itself was small and neat. The central window was decorated with a model, some two feet long, of a polished oak coffin, handles and brass plates and all complete. At the contemplation of this model and of the picture behind it, representing two mutes in scarves bearing black plumes, Gerald's heart became as heavy as lead, because, for the first time, he realised what the thing meant.

When a boy is brought up with the sense of belonging to the class of authority; when his associates do belong to that class; when it is assumed that success at Eton, followed by success at the University, will also be followed by success at the Bar or the House, or both, and that a brilliant career is open to him, with the House of Lords at the end of it,—that boy's thoughts are apt to flow on in a stream, always growing wider and deeper, to the certain end. That end does not dazzle; nor does the work before him terrify. Other boys may look forward to their chances of success with anxiety and misgiving; their ancestors were not accustomed to success; his were; what they did, he can do. If no ancestors, observe, then no confidence.

Again. It is a great thing for a young man of the middle class to distinguish himself at the University; nobody in the family ever did it before; it lifts that young man at one step to a higher level; it may be the means of lifting the whole family to a higher level; it may fill them all with new ambitions. For such a young man as Gerald Moorsom his University success was but a natural episode in the career: he was born to be Captain of Eton; he was born to be a First Class Classic; he was born to be a statesman; he was born to command, to lead, to rise.

And here he was face to face with the paternal shop and the emblem of one branch of the many with which his father attempted fortune—that of the model coffin.

It was one thing to be told a story which belonged to the past: a story, besides, quite forgotten and buried; and another thing to be reminded of it in this unexpected manner. Forgotten? Why, it stared one in the face; it was proclaimed in letters two feet long.

It was one thing again to be told by that poor starveling that he was ruined by a money-lender, and another thing to remember that at the time his father was carrying on business in this very quarter.

The man had spoken of his cousin. Could that miserable wretch really be a cousin of his father—and, therefore, of himself? His cheek flamed; he tried to assure himself that many people lend money in small sums; the petty usurer is found everywhere; it was absurd to find a cousin in every man ruined by an anonymous usurer. Yet the suspicion remained, and the uneasiness.

Why, the horrible thing pursued him and persecuted him. That Settlement woman, Helen, found out that he was in trouble; she would find out next what the trouble was. Stories of money-lenders found him out everywhere; the gentleman rogue was ruined, he said, by the money-lender; the unlucky decorator was ruined by a money-lender; and here before his eyes stood the first home of the great money-lender, his father, who had been the ruin of so many.

While he stood stupidly gazing at the inscription over the house front, the shop door was opened and a sleek elderly man in his shirt-sleeves appeared looking out upon the open area. He was of cheerful, well-fed, well-to-do, self-satisfied aspect, and he sniffed the morning air with satisfaction.

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The tapping of hammers from within showed that business was brisk.

Gerald crossed the road and saluted him.

"You are Mr. Nobes? I see a name on your shop front which interests me."

The man started. Why? He started and stepped back. Then he looked at Gerald curiously; then he replied slowly, and still considering the stranger as if thinking of something else.

"Moorsom, you mean, or Nobes? Moorsom is it? Well, sir, you've come to the right shop for information. For I bought the business of Isaac Moorsom."

"Of Isaac Moorsom? Where did he come from?"

"He was born here and brought up here, not far from this very street. So I suppose he came from here. I bought this business, and I paid for it. In the year 1862 it was. Moorsom had me over it. I'm not blaming Moorsom; he got what he could. But it was never any discredit to be had by Moorsom. A man had to get up early in the morning to have me, but Moorsom did it. That's business. I don't blame him; he bested me, and I'd ha' bested him if I could."

"How did he do it?"

"There's ways—business ways—of making a shop look twice as good as it is—Moorsom had me—I bargained, being a fool, to pay him according to his books. Then he lent me money to carry on, intending to get the property back in his own hands. He would have broke me—such was his crafty plan—but he went away. Talk of an eye for business! Ah! all of us—pretty well—were in his clutches. But he went away."

"Where is he now?"

"Well, if you don't know—I'm blessed if this isn't a rummy go." He stared and rubbed his chin. "Well, if you don't know, I don't. Dead and buried, very likely. A rich man for sure, living or dead. I have heard that he was once seen in a carriage and pair. But I don't know."

"You seem to admire his business qualities."

"I admire, young gentleman, the man who bested me. Because he's rare. If you ask me what he was as for his character—why—if you don't know—Ho! ho!" Why did the man laugh and choke? "I should say that he was a miser and a skinflint; a scraper and a squeezer; a robber of such as are fatherless, and a grinder of such as

are in a tight place. That's what you would be told, if you don't know. He bound 'em and he ground 'em; he bound 'em and he ground 'em. Still I must say he was the only man who ever bested me."

So pleased was he with his unwonted rhyming effect that he repeated it: "He bound 'em and he ground 'em. That's what he did."

"A noble reputation, indeed." Gerald's lips wore the semblance of a smile; but his eyes were troubled. He was listening to more revelations.

"If you didn't know Isaac—well—give him a forked tail and hoofs and ears, and you'd have the devil. But he knew the way to get rich. There are such men. As for you and me, we keep our shops in a honest way, and give and take as between neighbours."

"You don't look as if you were doing badly."

"Perhaps I am not, young man; and perhaps I am. There's one thing they can't do without"—he pointed to the model in the window—"they must have that. And though you cut it as fine as you please, without feathers and a single horse, there is the job—frequent and regular."

He pointed to the model in the window.

"They must have it. If you hear of Isaac anywhere, send me his address, and I'll go and see him and take him back his books which I've kept ever since waiting to show him."

"Are there any relations of his—brothers—cousins—in this place?"

"There is one man—I think he's a cousin—his mother was a Moorsom, or else he married a Moorsom."

"Who is he?"

"Well—he *was* something in my line."

"Another *croque-mort*? I mean—another undertaker?"

"No; he was a master painter once. Then he was broke—Isaac broke him. He became a ship's decorator: painted the white and gold saloons for the steamers—you know. But his hand dropped, and he can't paint any more. So he picks up odd jobs and cadges along, being poor but proud. He keeps out of the House; which, as a ratepayer, I admire and encourage. Beautiful it is for a ratepayer and a vestryman to see the struggles of such to save our money. If you want to know anything more about the Moorsoms, young man, go and ask Mr. Burkle. You'll find him a bit haughty, but you'll pass that over when you reflect that

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he keeps out of the House on cold tea and a crust, and hardly a stick left, in order to save the ratepayers' money."

"A ship's decorator—with a dropped hand?"

"There's the street—number five or six, anybody will tell you."

"Number five? Dropped hand? Why, that must be the man I have just left."

to one, because the quarter was that in which his father was born; because the shop still preserved the name; and because the man with the dropped hand had attracted the notice of the rent collector. But he stood for a little in silence, thinking over the strangeness and the danger of the thing. "No one can ever find out," said his father; "it is a secret between you and me."



ON THE DOORSTEP STOOD MR. NOBES

"His name's Burkle."

"Burkle! Yes—Burkle—yes." He repeated the words. He felt as if he were in some horrible nightmare. In one morning he had stumbled upon his father's original shop and his father's cousin. We call such a thing coincidence. It seems as if there must be a million to one against it. The odds, however, were nothing like a million

Mr. Nobes laughed: not at the stranger's amazement, for he was never one to trouble himself about symptoms in other people. He laughed because a pleasant thought occurred to him—a really humorous thought. "I say, Mister"—he put his thought into words—"if I had Isaac Moorsom's funeral, and if I were to conduct that funeral through these streets, you'd be surprised at the respect

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with which his remains would be received. If you don't know Isaac—Ho! ho! How should you? Why, you would be surprised, indeed."

Gerald turned and walked away. The humiliation of that morning will never leave him. For the first time he understood the truth and reality of the history: the true origin of his wealth. There are some days—some moments—which bite like the engraver's acid into the soul and make a mark that nothing can ever efface. They are moments when pretences and shams and self-deception vanish, and the bare truth horrible in nakedness stands before one. Like Lot's wife, he was fain to turn his head. On the doorstep stood Mr. Nobes, and beside him his wife.

"Missus," said Mr. Nobes, "look after that young chap. See! he turns his head. What do you make of him?"

"Mersey, George! He's the very image of Isaac Moorsom when he was young. Who is he?"

"I don't know. He's got something to do with Isaac, I'll swear. And I reckon he's just heard what we may call something to his own advantage."

Gerald did not hear what they said. He had turned back to look once more at the model coffin.

"It should be my crest," he said bitterly—"a coffin proper for crest, with three death's heads argent and a bend sable for a shield. For supporters two mutes in black scarves and hatbands, carrying black wands with nodding plumes."

CHAPTER IX.—THE BOYS' CLUB

A DINNER at the Settlement cannot be called a banquet even by its best friends. It is a short and simple meal, and when it is over the members separate, and all go off for their evening work.

"Now," said Jem, "you've had all the morning to yourself, Gerald. Have you made many discoveries?"

"I have made one or two discoveries which were unexpected, at least." So far, he was safe.

"Well, then, you've got to give your evening to me. Come along."

"We are going," he said, "to the Boys' Club. It isn't exactly the kind of club that you belong to. They are not well-behaved boys nor refined boys: they are the boys who are brought up to nothing except to

hang about and look for odd jobs. Some of them are the Hooligans of the place. Their great delight is in fighting: they fight each other; they fight the stranger within their gates; they form bands and companies for fighting. So, in our club, we practise the noble art of self-defence every evening."

"What! You encourage them in brutality?"

"Not at all. We convert brutality into ordered skill, and make fighting a game conducted according to rules. The lad who puts on the gloves is ashamed of fighting with belts and sticks and knives. He is out of conceit with the savagery of his old methods. See! In the same way the duello abolished private lurking in dark corners with a knife. Nothing like making a thing bad form."

He led the way through the streets till they came to a house much larger than the others; there were lights in some of the windows, and the ground floor was even brilliantly illuminated.

"There!" said Jem, with pride; "that's the doss-house and the club. It used to be a common lodging-house, and it was a den—it was, indeed. Likewise a Pigsty—and the haunt of Devils seventy times seven. Well, we bought it and took it over. And now it's as clean a doss-house—at fourpence a night—as you could wish: and the ground floor is the boys' club, and the back garden is the club gymnasium. And now you can come in and see for yourself."

The room was tolerably spacious and lofty. There were movable benches which could be placed against the walls or round the big blazing fireplace. There was a bagatelle-board in one corner. On the walls hung pictures of battle pieces: portraits of heroes—Nelson, Gordon, Grace Darling: pictures of great deeds—the soldiers facing death in line without one falling out of the ranks while the ship went down: the girl saving the children in the fire at the sacrifice of her own life: and others. Between and under the pictures hung boxing-gloves and single-sticks.

The club was assembling: the lads, clean-washed for the evening, were flocking in: they stood aside to make way for "Mister Jem" and his friend. He passed through them with a word and a nod to one or the other.

"This is our big room," he said. "Sometimes we have a little sing-song here—sometimes we have readings: mostly we put on the gloves and handle the sticks. In the court beyond"—he passed through the

The Alabaster Box

opposite door into a square enclosure, asphalted and covered in with a great skylight—"is our gymnasium. You see, we are not so large or so well furnished as some, but we get along." There were already two or three of the fellows, their coats off, trying the rings of iron which hung round the room. "Now"—Jem swept the horizon, so to speak—"is it better that these lads should be collected here for two or three hours every evening under some kind of order, or that they should hang about street corners, hustling passers by, drinking at the public-houses, or walking about the streets keeping company?"

"I should leave them to find out for themselves," said Gerald.

"No, you wouldn't, old man. Only something has rubbed against the grain which makes you contrary. Now I will show you how we take the devil out of these fellows."

He took off his own coat, and appeared dressed in grey flannels.

"In this place," he said, "it isn't enough to show the way. We must lead the way. They wouldn't think much of me if I couldn't do as much with the bars and the rings as themselves; and if I couldn't meet the best of them with the gloves, they wouldn't stay long in the club."

After a little discussion among themselves, the lads picked out two who stripped and took the gloves. The others formed a ring and the fight began.

"Now you'll see," said Jem, "how they drive out the devil. You will also observe that we are sticklers for the rules of the game."

Gerald further observed that the use of the gloves does not interfere with the reality of a fight. If these lads had been professional boxers, they could not have been more in earnest. The fight was limited to ten minutes, with as many rounds as could be crammed into that period. "If we let them fight it out," Jem explained, "the devil would come back again reinforced. As it is, they have a breather and a lesson in law and courtesy—you see how they shake hands at the beginning and the end—and they haven't time to be beaten badly."

In the background, Gerald observed a young fellow who towered above the rest, being over six feet in height, and broad in the shoulders. The other lads were mostly undersized, though wiry and active.

He stepped forward. "Our turn now, Mister Jem."

"Our turn it is," said Jem cheerfully.

"Gerald, this is our champion—George the Slogger he is called. We do a little friendly turn most nights, don't we, George?"

George grinned. But when he stood up, face to face with his antagonist, he neither laughed nor smiled. He was perfectly serious, as anxious as a whist-player: as serious as one who contemplates a coming checkmate: as serious as a man before an after-dinner speech. His features were clean cut, and had a character of distinction lacking in the faces of his companions. One of his eyes still showed the signs of the last encounter: his hair was cut short: his arms were curiously long: his chest was deep, his shoulders square. His antagonist was less in height, but of stronger build and of greater skill. The time limit, in this encounter, was necessary because the Slogger fought to win.

They shook hands, and the combat began.

Jem put on his coat. "Ten minutes is quite enough of you, George. Some day I shall not be able to come up to time."

"Then I'll challenge the Shadwell butcher," said George hopefully.

"Now I'll show you the doss-house." There was another entrance to the place—that used by the lodgers.

It was nine o'clock. The common room, a long and low room on the first floor, was already pretty full of men. A large fire was burning at the end of the room, and cooking by means of grill and frying-pan was going on.

"They can bring supper if they like," said Jem. "Come upstairs." The rooms overhead were furnished with beds and blankets. There were also cubicles for those who could pay sixpence.

"Does it want a Settlement to provide a cheap lodging-house?" asked the Doubter.

"It wants a Settlement to get the place run for its working expenses alone and to keep it clean. Formerly, it was never cleaned at all. Now, it is washed and scrubbed nearly every day. There is no end to the washing."

"You give them a clean lodging. Well—when you go away, they will go back to the pigsty."

"We look after them as well. And we are not going away. We find out who they are, and what they can do. We keep a register for them: we are in touch with some of the Railways: we get

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some to go abroad: we get the young fellows to enlist——”

“You could pay a man to do all this for you.”

“No, Gerald, you are wrong. We could pay a man to carry out rules: we could not pay a man to do what we do ourselves. The only paid service in this kind of work that is worth anything is the wage that barely finds a living. That is the real strength of the Salvation Army. Nobody can make any money out of it. Nobody can live in luxury on their pay. And in the Settlement the real strength is the voluntary work of people like our own.”

“If one could believe that in this multitude your efforts could produce any effect!”

“You do not understand—how should you?—the enormous value of a single lad—of one among the many. Take that tall fellow, George the Slogger—he’s the son of a rogue—a begging-letter writer—an impostor who says he was once a gentleman. What is the lad to become? He regards imposture as a natural thing to attempt—his father lives by it. Is he to become a criminal? Look at the fellow. Think of that strength and courage enlisted in the criminal ranks. Can we make him anything better? Well, old man, I am trying. It is difficult, but not hopeless.”

“The families of habitual criminals have a tendency to die out, I believe.”

“Perhaps. Their vices kill them off. Meantime, they make more criminals. Now we’ll go home and have a pipe.”

“There is a curious kind of tradition or history about this place,” said Jem, as they walked home. “I’ve struck it half a dozen times. So has Helen, she tells me. It is a story of a money-lender, who seems to have been a kind of Minotaur, devouring the helpless and the innocent. Whether he ever existed or not, I don’t know. Perhaps there is something grand in pretending to have been ruined by a money-lender: at the same time, the achievements of this mythical hero, or Loathly Worm, are really prodigious. He bought up whole streets and raised the rents: he kept on raising the rents: he charged huge sums for the ‘key,’ which is a kind of fine on taking possession; he lent money to the small tradesman and sold him up. He really seems to have been a wrecker of quite the old established form.”

Gerald made no reply. He restrained himself from an impatient word. Was there

to be no respite? Was he to be haunted and followed everywhere by the memories of the money-lender?

CHAPTER X.—GLORY

“HERE is our Girls’ Club.” It was one of the common tenement houses, distinguished only by the blinds and curtains in the windows. “We’ll look in, if you like. It is time for breaking up.”

Gerald followed with resignation. By this time he saw men “as trees walking.” The human procession passed before his eyes but made no impression on his mind, which was now entirely occupied with the persecution of Fate.

The girls’ club, now closing for the night, consisted of two rooms. In one of them was a piano: the floor, in front, was cleared for the girls to dance. They danced with each other, a way not generally preferred in other circles, but followed by them because the lads are better with the gloves than at the saraband. They danced every evening as the boys boxed—to drive out the restlessness: when they were not dancing they sang songs in parts or in unison: they sat about and talked: they looked at the pictures in the illustrated magazines: they took elementary lessons in needlework or in cooking: they talked over their private affairs. They were about forty in number. They presented, as Gerald first saw them, a company of sturdy and independent girls, the greater number strong and well nourished, mostly short and sturdy, with the usual exceptions of two or three anæmic girls.

Two of the members of the Settlement were present—Helen and the girl who had undertaken this work and ran the club every night. She was the slight and fragile girl whom we have already seen in a despondent mood. To-night she was again bright and cheerful: the evening, which was always more or less of a lottery, had passed off well: the girls had been amenable to reason, even affectionate and confiding:

Helen looked at Gerald. His face betokened no kind of interest whatever in the place or the girls.

“It has been an unfortunate day for us,” she said.

He started. “Why?”

“Because nothing that you have seen or heard has been able to touch you. It is

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shown in your face. It seems a pity to take the trouble of going round at all."

"Indeed, I begin to think so. I wish I had not gone round."

"There is something between you and us."

"Things are strange to him," said Jem, making excuses. "When he realises what they mean——"

"Thank you Jem." Gerald essayed a smile. "All I understand is that you are taking a vast amount of trouble. I only hope you will be rewarded by some return."

"There is always a return," said Helen, "though we cannot see it."

"Faith finds the return. Is it always invisible to the outside mind?"

"Sometimes we do see a return. I remember these girls when we came among them. They are wild and shy creatures still, but they were once far more shy and more wild. It was not uncommon for them to drink too much, and it was not thought in the least shameful to be drunk. Now at least they are ashamed if such a thing ever happens. I think we have not had a case of a girl coming drunk for more than a year."

"That is certainly something."

"It means a great deal more than the reform of this small company," Helen explained—"it means the creation of some public opinion. The longer I live among these people, the more I understand the enormous value of public opinion and the power of example."

It was certainly unfortunate that just then the exception should occur which proves the rule.

The girls were putting on their hats and going away: there were only half a dozen left. There was heard the raising of voices at the street door. "Don't let her in: carry her away. Come, Glory, don't try to go in." Then a girl burst in—her cheeks aflame, her arms flying, her hair loose, without hat or bonnet—laughing and crying hysterically.

"It's Glory!" said Beatrice. "And oh! Helen, she has been drinking!"

She had, indeed. That was a thing not to be concealed or denied.

She began to sing some music-hall refrain, but broke down and fell into a chair, dropping her head into her hands.



GEORGE CARRIES HER TO HER MOTHER

"You see, Gerald," said Jem, "it is not all plain sailing. We have these outbreaks."

"The return," he would have suggested, but the pain and trouble in the faces of the two ladies restrained him.

The girls came back. "Miss Wentworth, it's a shame," said one. "The boys have been giving her drink. Her chap's outside."

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"Is he outside? Call him in."

The chap came in. It was the champion boxer, the youth with the long arms and the lithe figure.

"You, George?" asked Jem. "Is this your girl?"

"It's my girl—we're going to be married on Sunday. Come, then. What yer got to say to that? Married. The boys were just treating her to a drop for good luck, when she began screaming and ran away—and me after her. I didn't know she was boozed."

"Did you give her the drink?" asked Helen.

"Not me. I was at the club. I come along after. Come, Glory, wake up!"

They looked on in silence. There was nothing to say. Some of the lads, out of friendship to their pal, had given the drink to his girl—the girl he was going to marry on Sunday. That was all. She was overcome. There was nothing more to say.

"Come, Glory, wake up!" She did not move.

The lad put his strong arms round her waist and lifted her as one would lift a child, throwing her head over his shoulder. Indeed, she was little more than a child.

"She's my girl," he said, with defiant eyes. "I'll carry her home to her mother. On Sunday we're going to be married!"

The evening was concluded. There were no more sights to be seen. Jem took Gerald's arm and led him out. The streets were full of people: the children, who ought to have been in bed, were on the doorsteps falling asleep: they crossed the main street where the trams were running up and down. The shops were open: young fellows with girls walked along smoking cigarettes: other girls arm in arm, four abreast, walked and ran singing and laughing.

"Return or no return," said Jem, "you must acknowledge, Gerald, that there is plenty of room for improvement."

"I have not denied it."

They repaired straight to Jem's room.

"This young couple," Gerald said, presently, "will give you, I should say, a good deal of pleasant work."

"Don't, old man. It fairly knocks me over. I knew nothing about it. This keeping company and the early marriages—they are the curse of the place; they are

worse than the drink: worse than the language: worse than the dirt: worse than anything. That poor lad! What can I do for him now? He is twenty and she is seventeen at most, and looks fifteen. We try to prevent these things with our clubs, by giving them something to think about. Yet, you see—they go on—just the same. The misery of it!"

Jem's cheerful face fell. He pulled hard at his pipe: the problem of the early marriage was too much for him.

"You don't respond, old man," he said. "Of course you don't know that poor chap as I do. Well—I hoped to have you on the Bench of Repentance long before this. You look gloomy. You take a gloomy view of things. What is it? Are you in love? You can't be hard up?"

Gerald got up. "I think," he said, "that I will go to bed. You've given me, between you, something to think about. It isn't Repentance," he added, "that you may expect. It's something—without a name—the exact opposite."

Gerald went to bed. His room looked upon the street. Although it was close upon midnight people were still about. There was quarrelling: there were sounds of fighting: a woman screamed "murder": there were running footsteps as of flight.

He got up and threw open his window and looked down upon the dimly lighted street and the moving figures below.

A day of humiliation unspeakable, followed by a night of rebuke and rebellion. Accident—he would not call it Fate—or the hand of Providence—had led him to the very scene of his father's beginnings: the place where he first practised his theory of the Trampler and the Devourer: he had actually found a cousin—a cousin who was a pauper, and he had found the place still full of traditions and memories and execrations of his father's name. Truly the sins of the fathers are visited upon the children. How could he wipe out the stain of that shameful story?

He sat at the open window considering these things with a dreadful anticipation of more discoveries and new shames, while the street grew quieter and the last footstep died away, until the cold October air had chilled him through and through, and he was fain to lie down and suffer weariness at last to lull his pain to sleep.

The Birth and Growth of Explosives



ANYONE who, while camping out in the wilds of India, has watched a native cook lighting his fire in a rude hole scraped a few inches out of the soil may assuredly imagine that he is a beholder of

that essential domestic operation performed precisely as it used to be in the dim antiquity of thousands of years ago. The Hindu himself has certainly never altered. He is as he has ever been; his methods, no less than his skill and cunning, are all unchanged. It is a part of his very creed that this should be so; and the only detail in which he probably has advanced on the practice of his remote ancestors is in the use of lucifer matches with which to ignite his dry brushwood.

If, however, we deny to the Indian of old a knowledge of phosphorus, there are plenty of records to show that we must credit him with a considerable acquaintance with explosive mixtures, in their nature closely akin to modern gunpowder. And this need afford us no particular surprise.

The story runs that in far-off times a party of mariners landed on the coast of Palestine, and proceeding to light a fire on the sand rested their cooking vessels on some lumps of the soda that formed their cargo. Thereupon the sand and soda becoming fused together revealed to them and the world after them the manufacture of glass. And what is more conceivable than that a wily Hindu—or Gentoo, as he was anciently styled—centuries before the year 1, should have chanced to light his fire over some nitrous earth—of which India possesses great variety—and that the ingredients in the soil becoming intimately mingled with glowing charcoal, a crude gunpowder mixture should be formed and fired?

Any way, in a Gentoo code of laws, to which a date of 1500 B.C. is assigned, there is a distinct reference to an existing use of some sort of firearm, and it is indubitable that India and China had learned the destructive power of villainous saltpetre in prehistoric times. In proof of this assertion have we not the testimony of Philostratus

that long before his time Indians dispersed their enemies by artificial thunder and lightning, and that even Hercules and Bacchus were once in this way driven away from an Indian fortress?

Certain is it that all through the Middle Ages the use of mines and firearms was developing in Eastern warfare, and fully a century before gunpowder was known in England some very respectable ordnance had been used at Delhi and elsewhere.

Passing to the history of the great explosive in England, it is recorded that it was put to practical use at the battle of Cressy, and there is an actual account, rendered by one John Cook, Clerk of the Wardrobe to Edward III, exactly 550 years ago, showing an item of 1,798 lb. of saltpetre and quick sulphur supplied to the King for military purposes, while in the reign of Henry VI another similar item appears, amounting "to the weight of XX tonne."

Up to this period gunpowder had been an article of general commerce, but ere long the threatening attitude of foreign Powers rendered it imperative that Britain should undertake her own supply, and we thus find licences granted for the digging of saltpetre within the realms of England and Ireland. For a while the principal manufacture seems to have been enjoyed by George Evelyn, of Long Ditton, in Surrey, the grandfather of the famous Sir John, so well known to us by delightful writings on forest trees and quiet sylvan joys.

About the same period, however, another spot was chosen by private enterprise for the production of the now important commodity, and it is deserving of special record that its manufacture took root there with such strange tenacity that it has endured practically for four hundred years on the same ground, where it now occupies nearly three hundred acres. This spot is Faversham, in Kent, where to-day are the vast mills of John Hall and Son, incorporated with the equally well known firm of Curtis and Harvey.

The contrast between the raw material of gunpowder and the finished product in the form in which we know it best is curious and instructive. In the accompanying photograph (fig. c) are shown quantities of salt-

The Birth and Growth of Explosives

petre, sulphur, and charcoal in their due proportions, and together weighing exactly one pound, while behind them is the familiar canister of strikingly small capacity by comparison, and yet holding exactly one pound of sporting powder. From this may be grasped the thoroughness of the processes undergone, which are technically known as grinding, breaking down, pressing, granulating, and finally polishing with black-lead or graphite. A few statistics, obtained from private and other sources, here suggest themselves relating to the recent growth of production in this country, and will be found sufficiently impressive.

Before the American War our export of gunpowder amounted to some 110,000 cwt. annually, while during that war this quantity rose at once to 145,000 cwt., shortly after, however, reaching an amount not greatly different from that of the present day. Again, about the same period the quantity of gunpowder used annually in blasting was estimated at about 130,000 cwt., a quantity which is intermediate between the above figures, and which, since the introduction of modern explosives has militated against increase, may be taken as approximately the estimate of to-day.

If, then, the same average quantity be assigned to the demands of engineering, sporting, and naval and military services, we shall be within the fact by reckoning that half a million hundredweight are manufactured in England each year. This quantity, if cast into a single conical heap would measure 200 feet at the base and 75 feet high, and this again, looked at another way, would allow of a train well heaped up and two and a-half inches broad being laid completely round the earth.

The accompanying illustration (fig. K) shows, against a measuring rod six feet long, the cloud produced, and rapidly mounting higher, by the ignition of only four ounces of gunpowder, and a simple calculation will show that were the heap of powder just considered lighted there would be generated a column of sulphurous smoke spreading up from an area of 150 acres and climbing to the limits of the clouds. This would be a very fair, if brief, imitation of the eruption of Krakatoa in 1883, reckoned the greatest explosion on record. At the same time the force generated can be fairly computed. In the construction of the railway between Folkestone and Dover 500 feet of the lofty chalk cliff were blown into the sea by the explosion of 20,000 lb.

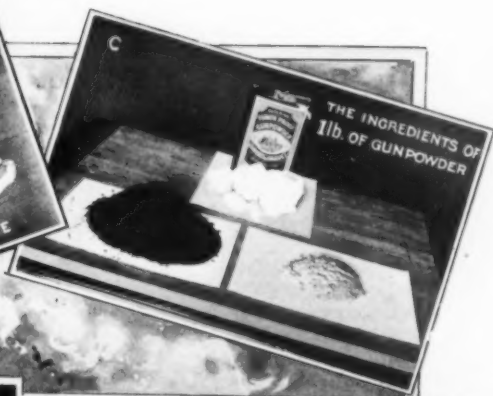
of gunpowder—from which it follows, on a moderate calculation, that our annual production would suffice to blast down the face of the entire natural rampart of our south coast.

As to the grim by-play of gunpowder, there is more than sufficient material at hand for a separate article. Rather more than fifty years ago nearly the whole of the Waltham powder-works was destroyed by the explosion of over 400 lb. of powder, while some twenty years later a like catastrophe at the Faversham works carried away the entire river front of the premises.

Explosions of greater or less severity have happened at most of our home powder mills and arsenals. Occasionally also like disaster obtrudes itself into private life, as, for example, in the middle of Regent's Park, when it was said that it was only the "little dip" in which the explosion took place that "saved London." On this occasion (1874) a little matter of four tons of blasting powder, aided by six barrels of petroleum, were exploded in a barge which had been provided with plenty of benzolene and a naked stove, as though expressly designed to carry the ghastly experiment into effect.

Probably no more appalling explosion of powder has ever occurred than that which took place within the British lines during the siege of Sebastopol, when a quantity of material of war, estimated at a quarter of a million pounds, blew into sheer space in the sight of all the armies. "Suddenly," wrote Mr. Russell, "up from the very centre of our camp, so that every ear could hear and every eye could see, rushes, with such a crash as may forewarn the world of its doom, and with such a burst of flame and smoke as may never yet have been seen by man, except in the throes of some primeval eruption, a ghastly pillar of sulphurous vapour. Men felt as if the very ground upon which they stood was convulsed by an earthquake."

We can form some correct estimate of the fell power of gunpowder as employed in warfare. Thus 2 oz. of powder is capable of throwing a cannon ball weighing 68 lb. across a range of rather more than one hundred yards, which is the limit of distance that a man—and a good man too—can throw a cricket ball weighing 5½ oz. If, then, the cannon ball were divided up into smaller balls, of 5½ oz. each, and distributed among a number of cricketers, it will be found that it would take the best



4 OZ. GUNPOWDER V. 4 OZ. COTTON POWDER (UNCONFINED) EFFECT ON A 3 INCH PLANK.

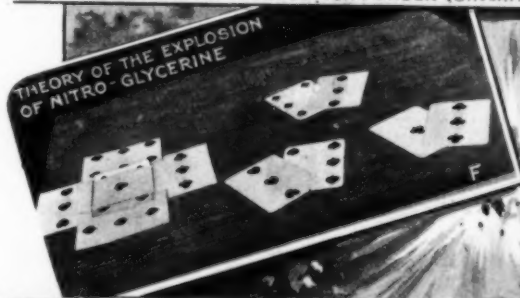


ILLUSTRATION OF ACTION OF DYNAMITE.

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throwing powers of 198 men to hurl the total mass of iron as far as could such an insignificant quantity as 2 oz. of gunpowder. Here we have a fair comparison between the might of gunpowder and the strength of a man's arm, inasmuch as the element of time has been duly reckoned in, and the charge of the cannon or mortar has been adjusted to throw the mass in the same space of time as the man.

But the power of powder appears far more astonishing when a properly proportioned charge is used to hurl a projectile. The due speed of a cannon shot has been carefully calculated, and it is found that a 24-pounder with a proper charge behind it will travel 470 yards in the first second. Thus such a shot fired from Piccadilly Circus will reach the Duke of York's column (fig. o) just one second afterwards, and sensibly sooner than would the report of the discharge.

Yet, inconceivably rapid as this is, we have in actual fact to consider gunpowder as only leisurely in its action, and herein lies its true suitability as a propellant. Had some explosive been sought to hurl the shot just referred to with greater speed, in all probability it would simply have burst the cannon. Time is of the very essence of such experiments, and must be reckoned with in the work that has to be accomplished. An open door may be quietly shut by the feeblest effort of a child, but if it be attempted to close it by a rifle bullet shot against it sufficient time is not allowed to overcome the inertia of the door, which simply remains open, while the bullet passes clean through it.

Reasoning in this way, we must, then, be prepared to find the effect of gunpowder essentially different from that of some more modern explosives. It is, indeed, probable that it will long hold its own against all comers, but it has now for many years had formidable rivals, and of these there would at first sight seem to be no end. It is enough to read down the list of "dangerous goods" displayed on the walls of any railway station to learn what a multitude of new names of explosive materials are in a commercial way before the public, and yet in reality this multitude is more apparent than real.

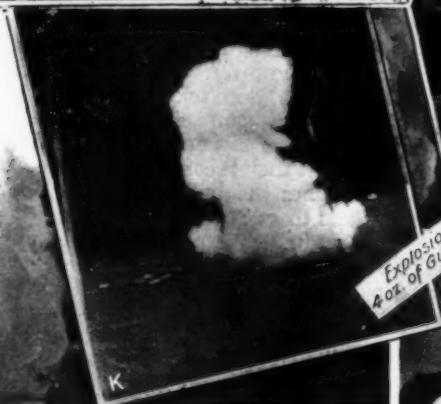
Guncotton, and also nitro-glycerine, are familiar names to all. Starting with these, and merely by various treatment and modifications, practically all the dynamites, tonites, cordites, *et hoc genus omne*, are

produced, and it is hardly too much to say that were only the production of one agent—nitric acid, which chiefly enters into the manufacture of both the above—controlled, the main weapon of all kinds of dynamiters would be removed. A few simple illustrations will make the nature of these two terrific agents sufficiently clear.

A tuft of cotton wool submitted to the action of mixed acid, and afterwards washed and dried with due care, will be unaltered in appearance. For all that, it has now become the deadly compound known as guncotton (fig. b), and its tremendous properties can be readily followed. The guncotton in the accompanying photograph (fig. j) was, during the exposure, fired on a heap of gunpowder, which, as will be seen, it has scattered but failed to ignite by reason of the sheer rapidity of its burning. It so far, however, produces nothing of the nature of an explosion. But when any portion, however small, is fired by a sufficiently smart concussion, like the mere detonation of a percussion cap or toy pistol, instantly the whole mass responds to this new stimulus, and its state of peaceful but unstable equilibrium suddenly breaks down with infernal and inconceivable might.

It will thus already be apparent that this terrible though innocent-looking material can readily be kept in a state of comparative security, so that at any rate even a lighted candle could only burn but not explode it. Its behaviour can, however, be controlled in a yet more remarkable manner, and its bulk, though as efficient as ever, can be reduced to a state of absolute harmlessness. This is brought about by simply wetting the material with water, rendering it thereby wholly incombustible. Yet all the while its innate devilry is unimpaired and ready enough to be evoked by special means. And these means are curiously supplied by the guncotton itself simply in its dry, normal state. If a mass of the wet and fireproof cotton contain within it only a small charge of the dry, and this dry portion contain a proper detonator, you then have a series like that possessed by the old woman whose pig refused to get over the stile until "the fire began to burn the stick, the stick to beat the dog," and so on, only in the present case the beginning and ending are practically simultaneous (fig. n).

One or two simple illustrations can readily be given of the foregoing. A strand of cordite (fig. p) will burn much as will an



Explosion of
4 oz. of gunpowder



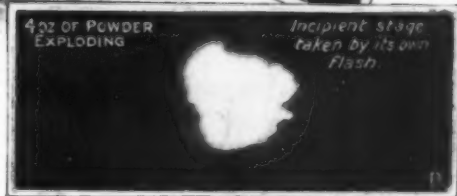
COTTON WOOL CONVERTED INTO GUN COTTON



THE RANGE
FROM PICCADILLY CIRCUS TO BUNK OF YORKS COLUMN



Arrangement of Detonator
TRY GUN COTTON & WET



4 oz. of POWDER
EXPLODING

Incipient stage
taken by its own
Flash

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ordinary thread—say, six inches in as many seconds—so that were a length hung on the telegraph posts along the Bath Road the whole of the hundred and six miles between Bath and London, and lighted at one end, the flame, if unextinguished, would take eleven weeks to burn to the other end. Had, however, fire been communicated by a detonator it would have travelled the entire distance in less than a single minute.

Calculations have been given, based on experiment, as to the relative power of gunpowder and forms of either of the nitro-explosives that have been considered; and the force of nitro-glycerine when detonated is reckoned to be five times greater than that of an equal weight of gunpowder, while of this giant force there have been some striking examples.

In America they do things on a big scale. Thus at New York in the clearing of the narrow strait known as Hell Gate there have been two principal operations. The first of these dealt with Hullet's Point, an awkward mass of rock estimated at 100,000 cubic yards, or not greatly smaller than the bulk of Westminster Abbey. In 1876 this obstruction was successfully blown away by the detonation of 52,000 lb. of explosives, mainly dynamite, the charge being fired by the chief engineer's little daughter, aged three years. The shock of this submarine earthquake was felt 150 miles away.

Then nine years later an attack on the remaining obstruction, known as Flood Rock, culminated in an affair of yet bigger magnitude. The rock, covering eight acres at its base, tapered to its summit, which showed a patch above the water-line measuring some 70 feet by 250 feet. This mighty mass was mined and charged with 300,000 lb. of the explosive known as "rack-a-rock," when the same child, now a young lady of twelve, was called upon again to press the button. The rock disappeared from sight and a towering crest of water climbed 200 feet into the skies.

That the invention of explosives must be looked upon as the result of happy (?) accident may be inferred from the crude ideas entertained as to their action by by-gone physicists. Thus Sir Isaac Newton, reasoning about gunpowder, infers that the charcoal and sulphur easily igniting combine to kindle the nitre, and quaintly adds that "the spirit of the nitre being thereby rarefied into vapour rushes out with an explosion, while the fixed body of the nitre

is also rarefied into fume, rendering the explosion more vehement and quick." A little later Dr. Ingenhouz, an active member of the Royal Society, explains to that body in terms of meaningless grandiloquence that the nitre "yielding dephlogisticated air and the charcoal inflammable air, the fire extricates the two airs and sets fire to them at the instant of their extrication." After him Count Rumford produces a theory born of painstaking experiment according to which the force of powder is simply due to the elasticity of watery steam.

In the language of more modern chemistry, however, what really takes place is a sudden decomposition of the mixed ingredients, accompanied by the production of gases at so high a temperature that on the instant they become expanded to some 15,000 times the bulk of the powder that produces them.

Proceeding to examine into the circumstances that attend the detonation of a typical explosive of the modern type, as, for instance, nitro-glycerine, we may resort to simple language and a homely illustration (fig. F). Nitro-glycerine is built up—stably enough until violently shaken—of infinitesimal bricks or molecules, possibly measuring no more than the twenty-five-millionth of an inch, each of which consists of four elements locked together in definite proportions and structure. Let the four suits of playing cards represent these elements, hearts indicating carbon, diamonds hydrogen, clubs nitrogen, and spades oxygen. Then the arrangement of cards on the left of the illustration represents one molecule of nitro-glycerine, and consists of 3 pips of C, 5 of H, 3 of N, and 9 of O.

Fair handling will not disorganise such an arrangement, but if subjected to a smart concussion it becomes instantly shuffled and re-dealt in the right-hand groupings, of which the uppermost combination is simply water and the two others suddenly formed volumes of carbonic acid and nitrogen gases respectively.

The disruptive effect of this redistribution of matter and evolution of heated gas is terrific, and its peculiar power to "strike downwards," i.e. to tear up pavement or whatever it may rest on, is simply told. If a little heap of gunpowder is placed on a slab of wood (fig. D) or stone covering a space of four inches square, it has above it a column of atmosphere weighing no less than two hundredweight. Then when the powder is fired, the rush of gas being, as we have seen,

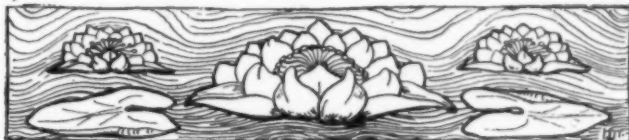
The Birth and Growth of Explosives

comparatively speaking deliberate, simply lifts the yielding air. If, however, dynamite or guncotton be substituted for the powder its generation of gas is so intensely rapid that it cannot lift the air in the time, and simply rends the slab instead (fig. E).

The whole case has been simply illustrated thus: Place a lath on a table with an open newspaper spread over it. Let,

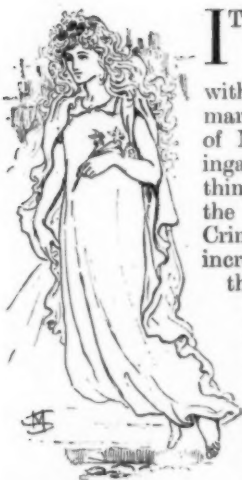
however, six inches of the lath project over the table's edge, and use this as a handle. Depress this handle slowly and the paper is lifted. This resembles the action of gunpowder. If, however, the handle is depressed very suddenly the paper remains unmoved and the lath is broken. Such is the action of dynamite (figs. H, I).

JOHN M. BACON.



Nurses at the Front

BY MARIE A. BELLOC



IT is impossible to consider army nursing in any of its branches without referring to the marvellous achievements of Miss Florence Nightingale. The state of things which existed on the outbreak of the Crimean War is almost incredible. Even when the authorities in the Crimea suddenly realised the awful inadequacy of the slight preparations which had been made for the care of the wounded, they were afraid to dip into their country's purse even to the modest extent of purchasing in Constantinople the absolutely needful supplies. The wounded soldiers died, not of their wounds, but of every kind of horrible disease brought on by filth, and neglect of the most ordinary sanitary precautions. A letter from Mr., now Sir William, Russell gives a terrible picture of the state of things. "The sick appeared to be attended by the sick, the dying by the dying . . . Are there no devoted women among us, able and willing to go forth and aid the sick and suffering in the East at the hospitals at Scutari? Are none

of the daughters of England in this hour of need ready for such mercy?"

How nobly Miss Florence Nightingale responded to this appeal, and how she and her party of devoted helpers landed at Scutari on the very day of the battle of Inkerman, is well known. Before their arrival sixty per cent. of the wounded had died, and though at the time of her arrival she found the most terrible state of filth, insubordination, and disease, before Miss Nightingale left the East the military hospital might certainly have been a model to any establishment of the kind.

In the present days of hospital trains, hospital transports, and, last but not least, hospital ambulances, it is strange indeed to glance at the curious little vehicle which accompanied Miss Florence Nightingale through the Crimean War. It was very light, being substantially composed of basket work; the interior being lined with waterproof canvas, the front and driving seat could be moved, and on the webbed frame, which was well padded round the sides, hundreds of the wounded were transported short distances.

Small wonder, therefore, that "the lady with the lamp" became so notable a figure in the popular imagination; every night she walked the four miles of wards and corridors. It must, however, be admitted that, splendid as was the work then done by Miss Nightingale, it would have left little or no

Nurses at the Front



FLORENCE NIGHTINGALE'S CARRIAGE IN THE CHIMEA
(From "The Illustrated London News" of February 24, 1855)

permanent result, had she not after her return home set herself—though invalided in health—to reform British nursing in all its branches. With the fifty thousand pounds presented to her by a grateful nation she founded the first real Training Home for

Nurses, and during the forty years which have elapsed since her return from the Crimea, no year has gone by without her being called upon to advise the military authorities as to the organisation of army nursing.



FLORENCE NIGHTINGALE IN THE HOSPITAL AT SCUTARI
(From "The Illustrated London News" of February 24, 1855)

Nurses at the Front



Photo by

THE LADY SUPERINTENDENT AND NURSING STAFF, NETLEY

[Homan

Miss U. C. Norman (Lady Superintendent) is the Head of the Army Nursing Service. She is wearing the following decorations: Royal Red Cross, Egyptian Medal and Bar, Khedive's Bronze Star

A most interesting incident at the dinner given last year (1899) to the survivors of the Balaclava charge was the reading of a letter from Miss Florence Nightingale, in which she said that, although few men and perhaps no women had seen so much of the horrors of war as she had, she still thought that war, as well as persecution, had its advantages. "But see those manly fellows in time of war, men not near the beasts, as sometimes we too sadly see in the time of peace: see them not one taking a drop too much; not one gallivanting with the women; every one devoting, aye, even his life for his comrade off the field, without notice or praise from anyone, either in words or in print; and if killed in the attempt, his name only goes down as 'killed in battle'; always devoted even to the death, as our Great Master and Friend, Jesus Christ, was to His fellow-men."

This characteristic epistle must have been penned by the writer just before she was in active consultation with the military authorities with regard to the hospital arrangements in the Transvaal.

The Royal Victoria Hospital at Netley,

the first stone of which was laid by the Queen on May 19, 1856, may be said to have owed its existence in the first instance to Miss Florence Nightingale and to the Crimean War. The building, which is beautifully situated on Southampton Water, consists of a hundred and thirty-eight wards, and as many as a thousand wounded men have been accommodated there at one time.

Netley cost the country half a million; but never was money better spent, for it is to Netley that we owe our splendid Army Medical Service, which, whatever may be its shortcomings in some points, is still the best in the world. In this connection it should never be forgotten that, in proportion to its numbers, the Army Medical Corps has received more Victoria crosses than any other branch of the Service, and it is a striking fact that in time of war the applications for posts in every branch of the Medical Service far outnumber the vacancies which it is found difficult to fill in time of peace.

The Army Nursing Staff is of course a distinct unit of the Army Medical Corps,

Nurses at the Front

but they work in close unison, and, owing to the "little wars" in which the country is constantly engaged, the wards of Netley Hospital are rarely without their complement of wounded soldiers. And this fact enables all those army nurses who have not yet seen active service to gather much practical experience of wounds and their treatment.

There is still a very general impression that the conditions of military nursing differ from general nursing in that any able-bodied woman may volunteer for the front with little or no previous experience of the work she offers to do. It must of course be admitted that this was so till comparatively lately, and yet there can be little doubt that Miss Florence Nightingale's previous experience of nursing stood her in good stead when organising the military hospitals in the Crimea. It is well known that when making her choice among those who asked to accompany her, she made a point of choosing those ladies who had already had some experience of nursing, although in those days there was no training in the modern sense of the word.

It cannot be stated too plainly, especially at the present moment, that no volunteers are accepted by the Army Nursing Service. All appointments are made by the War Office; military hospitals are one and all under the control of the Director-General of the Army Medical Department; and it is to him at the War Office that all inquiries must be addressed. The conditions of service are anything but easy, for candidates must have had at least three years' preliminary training and practice in a general hospital before they are eligible. The age of the applicant must be twenty-five to thirty, and gentle birth is a *sine qua non*; the candidate must also have good personal recommendations. After entering Netley Hospital each candidate goes through a probationership of three months before being placed in a position of responsibility.

On the other hand, it must be admitted that the life, for those who care for nursing, is an exceptionally interesting one, and the salaries paid compare very favourably with those offered to ordinary hospital nurses. A Lady Superintendent receives £150, rising to £200; a senior nursing sister £50, rising to £70; a nursing sister £30, rising to £50, and there is a pension after the age of sixty, at the rate of seventy per cent. of salary. Nurses are, however, expected to go

on with their work till the age of sixty, unless they are invalided or become incapable.

Apart from mere physical courage, a number of very special qualifications are required by an army nurse. Those who imagine that their loved ones are actually tended, when wounded, by the nurses themselves, make a great mistake. The army nurse is there to superintend the men nurses who are under her orders; it is, however, said that men make excellent nurses, and of course the sister-in-charge is able to watch her assistants' conduct and behaviour far more closely than if she were constantly engaged in the active business of attending to the patients herself.

It is all-important that an army nurse should have exceptionally good health. Constantly she has to be months under canvas, and, in addition to actual nursing of the wounded, there is a great deal of less interesting work connected with the ordinary illnesses of Mr. Tommy Atkins, these being too often caused by a soldier's own recklessness, especially in drinking unwholesome water.

Army nurses are exceedingly well treated, and while on active service officers and men vie in loading them with marks of kindness and gratitude. War medals are bestowed upon them in recognition of exceptional services, and on more than one occasion they have been mentioned in despatches.

While on active duty the army nurse wears a useful and workmanlike uniform. The gown is of fine navy serge, the cloak being of thick navy cloth turned up with a hem six inches deep of fine scarlet serge, the hood being lined in the same fashion. The cap and cape is the same as that worn by ordinary nurses, and the bonnet is plain blue, closely fitting, and tied with white strings, while Eton collars and regulation cuffs complete the costume. Each army nurse is supplied with a considerable number of washing dresses made of light blue linen, and with eight strapped linen aprons. If sun-hats are required—and they often are in the climates which have to be faced by the Army Nursing Corps—they are bought on the spot.

Although all those army nurses who have had a chance of active service are, as a rule, enthusiastic in praise of their profession, the life is an exceedingly fatiguing and arduous one, and is surrounded by many physical dangers—indeed, with the one exception that the army nurse does not actually go out under fire as the army

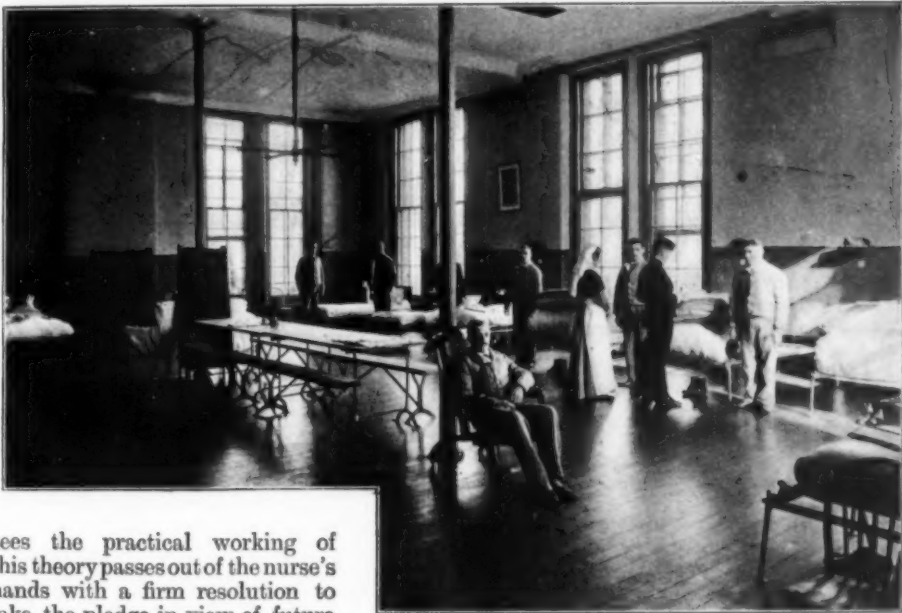
Nurses at the Front

doctor constantly does, she may be said to share to the full the hazards and the suffering entailed by warfare.

In one matter the modern army nurse has been able to do splendid service to the British Army, and that in a way which will probably be a surprise to many people. No one else can realise as well as she can the effect of a soldier's conduct on his general health. Thus a man who is a teetotaler will, other things being equal, always recover from a severe wound twice as quickly as his intemperate comrade. This fact is naturally often mentioned in the military wards, and many a man who

ber of the Army Nursing Service has had to have a military hospital training, in time of peace each nurse, if not wanted by the authorities, is free to take up a civil appointment. Many of the nurses who have gone to South Africa were in what is called the Army Nurse Reserve force. This is a body of thoroughly trained women working under the direction of, and in conjunction with, the War Office authorities. Great care was exercised in choosing those nurses who volunteered for service in South Africa, and preference was shown to those who had already been on active service.

So large a nursing staff went out to



sees the practical working of this theory passes out of the nurse's hands with a firm resolution to take the pledge in view of future active service.

It often falls to the lot of the army nurse to take sacred messages home from the dying soldier to his family and friends. All sorts of pathetic tokens and letters are committed to her charge, and in her the army chaplain often finds a valuable auxiliary.

Before Parliament was prorogued the Under-Secretary for War stated that there were only five nursing sisters in Natal, but a vigorous effort was made to remedy the deficiency, and successive contingents of the Army Nursing Corps were sent out with all possible rapidity.

Nurses for the front were drawn from almost every important town in the United Kingdom; for, though every mem-

MEDICAL WARD, NETLEY. MEDICAL OFFICER'S
MORNING VISIT
Photo by Homan, Netley

ber of the Army Nursing Service has had to have a military hospital training, in time of peace each nurse, if not wanted by the authorities, is free to take up a civil appointment. Many of the nurses who have gone to South Africa were in what is called the Army Nurse Reserve force. This is a body of thoroughly trained women working under the direction of, and in conjunction with, the War Office authorities. Great care was exercised in choosing those nurses who volunteered for service in South Africa, and preference was shown to those who had already been on active service.

Nurses at the Front

is the daughter of a distinguished soldier, and so is peculiarly fitted for the kind of work to which she has devoted her life. A contingent in which the whole nursing world is especially interested was composed of a number of Princess Christian's own nurses. Her Royal Highness took an active part in assisting the Windsor Central British Red Cross Committee; and two of the nurses sent out, Miss A. B. Brebner and Miss H. Hogarth, had long been members of the Princess Christian Nursing Home.

Sister R. T. Macintyre had before sailing seen something of the kind of work to which she was going out, at the Portsmouth military hospital, but it would be difficult to imagine anything more different from our fine home hospitals and the rough field hospitals which were soon established in Natal. In this connection it is a curious fact that just after the outbreak of hostilities, a colonial nurse, Miss Margaret McKegnie, who had been trained in England, was practically "commandeered" by the Free State authorities, and put in charge of the Harrismith hospital, where she had of course to superintend the



Photo by

[Russell & Sons

NURSE ISABELLA SMITH

Who was decorated by the Queen personally a short time back at Windsor Castle, has gone to the war. Miss Smith went through the Ashanti and Benin expeditions, etc.



Photo by

[Bussnell's Sons

MISS R. T. MACINTYRE, A.M.S.

A Nursing Sister who has gone to the front. She is stationed at Gosport Hospital when at home.

nursing of those Boers wounded during the first engagements.

The first two hospital ships or sick transports to be sent to South Africa were the "Spartan" and the "Trojan." These floating hospitals were utilised for conveying the wounded from Durban to Capetown. Two hospital trains were early sanctioned, and to each were awarded two nursing sisters of the Army Nursing Service. But as usual private enterprise was well to the front, and, in addition to the Princess of Wales's hospital ship, another was sent out named the "Maine," raised by American subscriptions and officered by American nurses, who were, it is interesting to learn, selected by Miss Clara Barton, the foremost authority in the American nursing world. These nurses, four in number, were under a British matron, but the whole personnel of the ship, with the exception of the matron and of the chief medical officer, consisted of Americans. The hospital ship is a comparatively recent innovation, and one much to be commended, for in this kind of floating hospital the wounded are found to

Nurses at the Front

recover more quickly than in even the most airy wards on shore.

A considerable number of ladies early went out to South Africa as amateur nurses. Foremost among them was Mrs. Richard Chamberlain, the sister-in-law of the Colonial Secretary, together with her stepdaughter, Miss Amy Chamberlain. Mrs. Richard Chamberlain early made up her mind that there would be plenty of room for extraneous help, and the two ladies accordingly took with them not only

nurse who proceeded to, or who happened to be in Africa, went to the seat of war at her own risk and at her own expense, and was not in any way associated with the Army Medical Service.

It may not be out of place to say a few words as to the nursing arrangements made and carried out by the Boer force. As was not unnatural under the circumstances, they did not make adequate preparations, and at the beginning of the war their wounded were deeply to be pitied—indeed, those who



Photo by

SURGEONS ON PROBATION, NETLEY

[Homan, Netley]

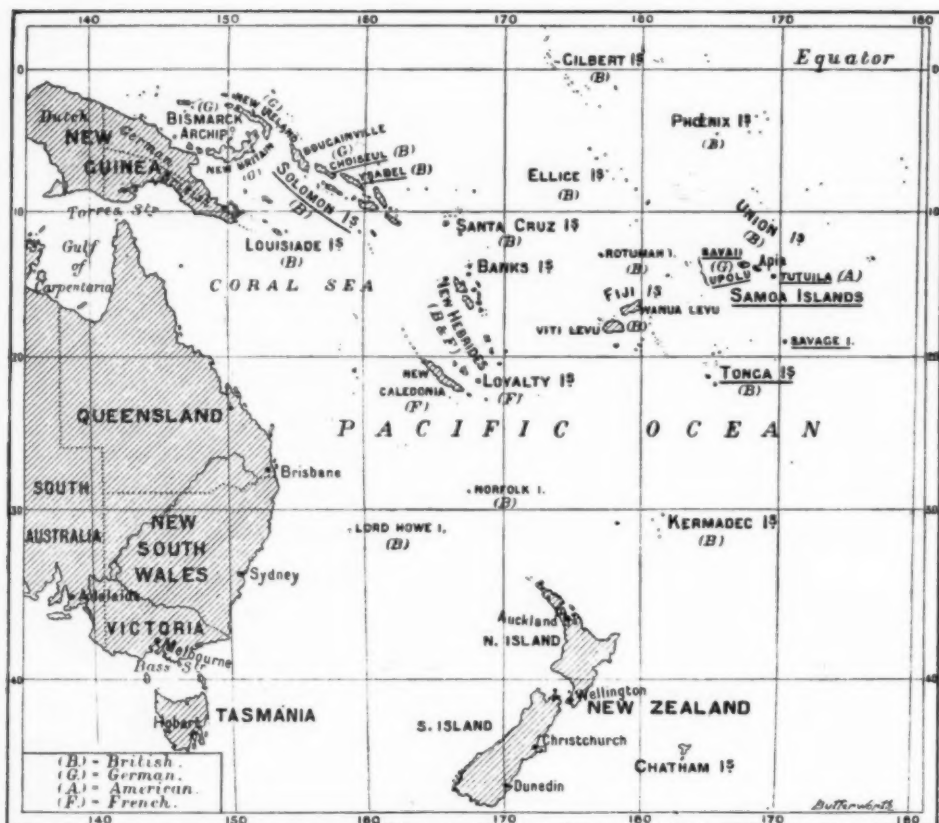
a large store of medical appliances, but also many luxuries suitable for the wounded.

Lady Sarah Wilson, the aunt of the Duke of Marlborough, happened to be in South Africa at the time the war broke out, and she proved of the greatest assistance in helping to organise the nursing arrangements inside the beleaguered town of Mafeking. Lady Hely Hutchinson, the wife of the Governor of Natal, actually went out on the first hospital ship sent from home, and took an active part in arranging the first military hospitals in Natal. It need, however, hardly be said that every volunteer

fell into the hands of the British soon learnt to congratulate themselves on the fact. Ambulances were organised in aid of the Boer forces in Holland and in Germany, but they did not reach the scene of action till many weeks after the first battles had been fought, and at one moment it was said, probably with truth, that every house in Pretoria contained at least two wounded men, who, whatever the kindness shown them by their hosts, must have sadly lacked the special surgical and medical appliances which are so much needed by those wounded in modern warfare.

The Surrender of Samoa; and how it will affect Missionary Enterprise

BY LOUIS BECKE



THE ISLANDS OF THE PACIFIC AFFECTED BY THE AGREEMENT ARE UNDERLINED

THE ninth of November, 1899, will be long remembered in the annals of South Sea history, particularly that aspect of it which is connected with British missionary enterprise in the southern hemisphere; for the Government of this country on that day announced that a treaty had been concluded by which all British interests and claims in distracted and unfortunate Samoa were surrendered to Germany in return for territorial concessions made by that country to this in the Solomon Islands, Tonga, and Africa.

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From a political point of view the agreement is certainly satisfactory. Samoa will now be under the control of a present friendly Power, the continuous bloodshed caused by internecine warfare will cease, the incapable, irresponsible, and intriguing officials who "administered" the government of the country under the unworkable clauses of the notorious and ill-conceived Berlin Treaty Act will be sent to the right-about, and the three greatest nations in the world—England, Germany, and America—will no longer look on Samoa as the

The Surrender of Samoa

germinating ground of national distrust, and a possible cause of war, as it was in 1889.

What happened in that year is history—the great hurricane, and the episode of the *Calliope*, an episode that will for ever be emblazoned on our naval annals as a triumph of British seamanship.

Let me briefly recount the tale.

Seven warships—three German, three American, and one British (the famous *Calliope*)—were lying in Apia Harbour; the three Americans and the one British ship watching the actions of the Germans—all seven ready for the bloody work of slaughtering each other's crews and bringing about an appalling European war, if one individual commander, writhing under the strain and continual unrest and anxiety, committed an indiscretion, even though that indiscretion was the outcome of some humane motive; on shore, the sullen, brooding, despairing Samoans, wrought up to desperation by the attacks upon their lives and liberties by the Germans, hoping and waiting for some sign from England or America that they should not be swept away as a leaf in the storm by the arm of a mighty foreign Power, whose haughty consuls, and ships, and marines, and blue-jackets were unknown to them five-and-twenty years before. But they waited in vain—the liberties, and lives, and religious faith of a poor forty thousand brown-skinned people counted but little in the eyes of European diplomatists in those troubled times of 1888-9.

And then, on March 16, 1889, when the minds of thinking men in Samoa were distraught by fear of the impending fate of its people, who despairingly waited, rifle in hand, to be ground to dust and utter extinction through the lust of power of one Christian nation, there came help from Heaven itself, when England and America, to whom they had looked so long and so vainly for rescue from foreign domination, had apparently deserted them, though both had made them promises that their independence as a nation should be protected. A fearful hurricane on that day destroyed the German and American fleets, and the shores of the harbour of Apia were strewn with the bodies of many hundreds of gallant seamen. The *Calliope* alone escaped, after a terrible struggle with the elements—a struggle which has made her name and that of Kane, her brave commander, famous in history. Who could tell the story of

that dreadful day as Robert Louis Stevenson has told it in his "Footnote to History?" His heart, his love for all that was good and brave, his pride in his British blood, his affection for the brown-skinned people among whom he dwelt, and his sense of justice and honour to the very Germans who so fervently detested him, guided his pen when he wrote the tenth chapter of that book. The conduct of the Samoans to the survivors of the German fleet is but barely recorded in official documents—it is sufficient to say that they, forgetting their hatred to their Teutonic enemies, behaved nobly in that terrible time, and showed the world that they were something better than the "wild and savage Samoans," of whom the casual novelist delights to write—without knowledge.

Out of that disastrous hurricane came a respite to the people of Samoa, but that respite is but a sordid and ignoble tale of the incompetent and partial European officials of the Berlin Treaty Act, of further rebellions and bloodshed, of persistent intrigues of the Roman Catholic missionaries to stir up Mataafa and his chiefs to rebellion against the Tripartite Government, of studied contempt and continuous ignominy heaped upon the Protestant missionaries by the swaggering German officials who ran the so-called "government" in defiance of the clauses of the treaty, and their own instructions from the Kaiser, and who used the French Roman Catholic missionaries as willing and useful tools to keep the Samoan Islands in such a state of bloodshed and turmoil that Europe would cry aloud, "Stop! Let there be peace. Let one nation or the other have absolute control over this distracted group."

And now Germany has absolute control over Samoa; England has acquiesced, America is content with the island of Tutuila, and there is no more to be said on this point. The future "comity of nations" necessarily counts high in such a minor question as the surrender of such a small group of islands as Samoa to a foreign Power.

But from another point of view, the cession of British rights in Samoa is to be deplored for many reasons, as I shall endeavour to show, though the subject needs the virile pen of the Stevenson who loved Samoa and its people so well to tell of the bitterness and sadness of thirty-four thousand people thus suddenly dis severed from England—from all future associations

The Surrender of Samoa

and connection with the nation to which they owe their enlightenment, their schools, their churches, and the guidance of their esteemed missionaries. I know the Samoans well, I know some of the missionaries who have spent a lifetime in the South Seas, and I know that this cession of the headquarters of British missionary enterprise to even a Protestant foreign Power will be a staggering blow, not only to the natives and the white missionaries of the Samoan group itself, but to those who inhabit the Pacific Islands generally, wherever the red ensign of England is seen waving amid the swaying plumes of the coco-palms. Go where you will among the islands of the Ellice, the Union, or Tokelau Group, the Kingsmill and Gilbert, you will everywhere see the beneficial results which have accrued to the natives from the intercourse and training they have received from teachers educated at the great training institution at Malua in the island of Upolu. From Samoa these young men and women have radiated in all directions among the groups of the South, and (latterly) the Western, Pacific. The pay they receive from the London Missionary Society is small—I believe it is usually £20 per annum; they live and do excellent work among the low-lying atolls of the Equatorial Pacific, where a white missionary's time and influence would be wasted—for he has a greater field for administrative and personal labour elsewhere.

The native teacher, however, has his faults, and needs supervision by his white superiors, in the absence of which he too often becomes tyrannical, disposed to take the bit between his teeth and cause dissension between his flock and the white traders, by his desire to show his authority. But, nevertheless, he makes good material—and the only material available. He may, as the late Commodore Goodenough remarked, "be apt to put on airs when away from headquarters, and cause mischief; but he is a good factor in the work of civilisation and Christianity."

But to return to Samoa itself, and to the present condition of affairs. During the late rebellion the most scandalous charges were made against the resident white missionaries of the London Mission and other Protestant societies. The author of these charges was Cardinal Moran, the Cardinal Archbishop of Australia, whose exalted position enabled him to disseminate his slanders throughout the world's press.

His last attack on English missionaries was made some months ago in Sydney, when he declared in a public speech that he knew for an absolute fact that during the late fighting in Samoa the agents of the London Missionary Society urged the commanders of the British and American warships to fire on the Roman Catholic cathedral in Matafele, and destroy a number of children and aged and infirm natives, who, belonging to the Roman Catholic faith, had sought refuge therein. Of course no intelligent person believed such an outrageous statement—except, perhaps, the audience to whom it was directly made—for his Eminence during the past six years has distinguished himself by the malignancy of his preposterous and odious charges against all Protestant missions in the South Seas, and against the London Missionary Society in particular. This cultured "Prince of the Church" has, time after time, delighted his appreciative audiences by uttering the vilest calumnies against men whose honourable record is their glory—Englishmen and gentlemen whose labours in the South Seas alone made it possible for the French priests to follow them and live in safety among hitherto savage races.

A residence of half a lifetime in the Pacific has convinced me that wherever a Roman Catholic mission is to be found—a mission which has crept in under the wake of the hated Protestant—there will you find the breeding-ground of lies about, and vilification of, everything that is English. In Samoa, where, for the past five-and-twenty years, the Catholic missionaries have made a determined but fruitless effort to achieve the success attained by our own missions, their jealousy and intrigues are only limited by their weakness and the comparatively slight hold they have upon the native mind. Yet, slight as that hold is, it is now, and always has been, a power for evil, and is largely responsible for the past years of distraction, bloodshed, and misery. When England, Germany, and America assumed the control of the group, the three Powers relied largely upon the influence of the missionaries to aid the Treaty officials in maintaining order, and they were not disappointed. But the German officials played a double game—they were false, not only to their British and American colleagues, but to their own Government as well. To drive the English settlers out of the group was their one object, and they found the French missionaries always as eager

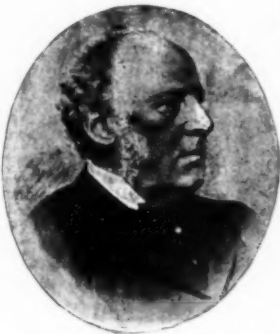
The Surrender of Samoa

to openly attempt the dirty work of sowing suspicion and distrust of England in the native mind. Mataafa, an able, intelligent, and patriotic chief, representative of many of the noblest and most influential families in the land, is, unfortunately, a bigoted Catholic, and as wax in the hands of his priestly advisers, whose hope is now that Germany will appoint him to the kingship, and that, through him, they will be able to found churches and schools in districts which hitherto would have none of them. But if they count on active aid from Germany to propagate the Roman Catholic faith, they make, I imagine, a serious mistake. Germany wants the group to be thoroughly German; but she will not permit any attempt to coerce the religious faith of thirty-four thousand people to please the priestly leaders of a minority of six thousand. She is too great and enlightened a nation to pursue such a course, which would only result in further bloodshed.

But, as I have said, the loss of Samoa as one of the headquarters of missionary work in the Pacific will be a heavy blow, which will be felt even to the shores of

New Guinea; for the prestige of the London Missionary Society and the Wesleyan Mission will naturally, though unjustly, suffer in the native eye. It will probably limit the operations of the great training school at Malua, which may possibly have to be removed to Tutuila, where, under the Stars and Stripes (for that island, fortunately, becomes an American possession), it will yet, we must hope, pursue its splendidly useful career in a minor degree for many years to come; it will dishearten and terrify an intelligent race of people who were redeemed from savagery by Englishmen, and to whom England (Peretania) is a household word, and an affectionate memory, though she has been none too kind to them politically; it will be a source of joy to the ever-meddling, intriguing emissaries of the Church of Rome, always ready to stir up mischief and dissension and hatred, so that one convert is gained; it will bring unrest and distress to a hot-blooded, excitable native population, who will not relish the stern rule of a military nation like Germany.

Sir John E. Millais



IN these hurried, eager days no great man need feel anxiety about his posthumous fame. Already in his lifetime he can watch the busy pens preparing his niche; and he is aware—with what feelings one can hardly guess—that his obituary notice is being kept up to date in every newspaper office. No sooner has the end come than the world of his contemporaries hastens to play the part of posterity;

reminiscences and appreciations multiply; and their tide has scarcely slackened, our sense of personal loss has scarcely subsided, when the "authorised" biography appears, and the dead master's name returns to every lip for a season. Little more than three years have elapsed since the most famous painter of his time was buried at St. Paul's; and now the loving care of his son has placed in our hands, if not the definitive biography, at any rate an exhaustive mass of material from which the final word, the complete and rounded picture, may some day be developed. Meanwhile, the most casual reader of Mr. J. G. Millais' two volumes¹ cannot fail to retain a vivid impression of one of the most striking and engaging figures of our time.

¹ "The Life and Letters of Sir John Everett Millais." Methuen.

Sir John E. Millais

To deal briefly with dates and facts: John Everett Millais was born at Southampton on June 8, 1829, of an old Norman family, long settled in Jersey. His precocity was extraordinary, and can only be compared with Mozart's. "When he was only four," we are told, "he was continually at work with pencil and paper." There was never any doubt about his proper vocation, and at the age of eight he was brought to London, there to begin his art education. In 1838, when only nine years old, he carried off the silver medal of the Society of Arts. Next year he was admitted—the youngest student on record—to the Royal Academy Schools, where he remained six years, taking every prize for which he competed. In 1845, while still a student, he exhibited his first picture at the Academy. Three years later he joined, with Rossetti and Holman Hunt—lads like himself—in founding the famous Pre-Raphaelite Brotherhood; and "*Lorenzo and Isabella*," the first work he produced under the influence of the new creed, "was held to be the prime joke of the year (1849) by a dullard public." In 1853 he exhibited "*The Order of Release*," and was elected Associate of the Royal Academy. (He had been elected once before, in 1850, but his extreme youth was then held to invalidate the appointment.)

Years of keen struggle followed; every picture he exhibited became a battle-field of the critics, the '*Times*' leading the attack, and Mr. Ruskin raising his sonorous voice, almost alone, in the defence. Meanwhile Millais was steadily working out his artistic emancipation, and in 1859, the year of "*The Vale of Rest*" and "*Apple Blossoms*," he broke the bonds of Pre-Raphaelitism, as Rossetti had already done, and took his mature talent out into the free air. For a moment the result seemed to spell ruin. Ruskin joined the ranks of his adversaries, and in those days Ruskin's word carried more weight than any critic's before or since. The Council hung the pictures as badly as they dared; the frightened buyers held aloof, and "even the picture-dealers began to look askance at his works as things of doubtful merit." But the public held by him loyally. "Never have pictures been more mobbed," he writes a few days after the opening of the exhibition. The tide turned almost at once; buyers took heart again, and next year, with "*The Black Brunswicker*," he took up a position where hostile criticism was powerless to harm him. But it was not until 1863, after he had

waited ten years on the threshold, that the Academy consented to open its inner doors to him and make him a full member. Even then they were reluctant to acknowledge his position, and in 1865 his Diploma work was promptly rejected by the Council. Thereafter the tide of success was unbroken, and honours, native and foreign, crowded upon him, culminating in February, 1896, when the unanimous vote of his fellow-Academicians placed him in the Presidential chair. He lived not quite six months to enjoy the crowning distinction. He died on August 13, and seven days later his body was carried to St. Paul's Cathedral, there to lie in "Painters' Corner" beside Leighton and Reynolds and Wren.

It is said that none of the pictured likenesses of Millais are entirely satisfactory; but of vivid word-portraits we have many, from that of the little golden-haired child in short frilled trousers and plaid tunic, who had to be hoisted on a stool that the prize-day audience might see him receive his medal, to the one Mr. Spielmann draws of the dying man, "old, white-bearded, wasted, worn and dumb, but bright and handsome still—who yet has a warm and lusty grip for the one or two who may say good-bye, and a faint smile of happy greeting that shows he is the old Millais still." The "old Millais," the Millais of maturity, lies between, and the impression of him that one carries away from a perusal of innumerable reminiscences is of a *big* man—big in every sense. One of the handsomest Englishmen of his time, he was over six feet in height, and robust in proportion, loud-voiced, bluff and hearty of accost, and overflowing with vitality. "He was always in a whirlwind hurry," says a friend; and he never knew an idle moment. To each of his immensely varied interests in life, from deer-stalking to Bach's fugues, he brought the same energy and gusto that he lavished on his painting. "I never saw such a power of concentration in any man," declared Mr. Gladstone, whose own greatness owed much to the same rare faculty. A masterful man, "he liked always to be right," says one friend; in his house, says another, "he ruled all, and all was ruled for him." He stood emphatically on his own feet, and went on his own way, self-sufficient in the best sense of the term; he rarely read a criticism on his work, and was never influenced by one. He had a supreme confidence in himself and his

powers; in 1859, when he was being overwhelmed with rancorous abuse, he wrote to his wife, "My works are not understood by the men who set themselves up as judges. Only when I am dead will they know their worth. . . . Let me assure you that they *must* win their way to the front in time."

In spite of name and origin he was English to the core, as well as typically English on the surface—"the *beau idéal* of John Bull," says Mr. Spielmann, speaking of his personal appearance. Essentially English was his love of the open air; fishing and shooting were his favourite recreations. A frank and hearty lover of all that was good in the world of art and men, he was as hearty a hater of all that seemed to him mean and false. His character from end to end ran on broad and simple lines, easily legible; there were no subtleties or concealments, and not one of the kinks and deformities that some would have us believe to be the inevitable concomitants of genius. And no man ever enjoyed life more. "How I envy Millais his wonderful spirits and powers of enjoyment!" said Leighton once. His own words, spoken to a friend when the fatal disease was tightening its grip, were—"It will kill me. But I am ready and not afraid; I've had a good time, my boy, a very good time!" The head of his profession, the most popular man in it, the favourite of the public, blessed with a healthy mind in a healthy body, with a hand that could unfalteringly accomplish all that his busy brain demanded of it, with a spirit untroubled by doubts and yearnings—Millais had, indeed, such a "good time" as rarely falls to the lot of genius.

And as the man was, so was his work. "To talk of Millais," says one, "one must need to talk of his pictures, for they were Millais himself." This being so, there is no cause for wonder at his exceeding popularity. The "*beau idéal* of John Bull" could hardly fail to achieve work that was after John Bull's own heart. The public believed in him, and he in the public. "I have great faith in the mass of the public," he writes; "they are the only really disinterested critics." He loved the things the people love—children ("they are the most beautiful things in this world"), fair women, flowers, animals (his diary, which we are now permitted to read, is full of playful references to kittens, rats, pigs, and sheep), Nature, in her obvious, everyday

moods, simple drama, humorous or pathetic ("Pathos," he said, "is my poetry"), and the realism that makes for beauty and eschews the obscure and ugly, though he was not afraid of honest ugliness. And he painted them all; it is characteristic of the man that he never specialised. Nothing struck visitors to the late exhibition of his collected works so much as their extraordinary variety of subject and treatment. There were no marine pictures, for, curiously enough, this descendant of a long line of islanders had little sympathy with the sea; but everything else was there. If a face or scene or subject struck his fancy, he set to work straightway and painted it. "He began his work without premeditation," we are told, "and was full of fire and impatience to get to the painting in which he delighted." The *painting* was the thing. "The mere laying on of colour was a joy to him." "If I were a rich man," he once said jokingly, "I would pay some one to paint pictures for me, and spend my time in putting high lights in the boots." His command over the technical resources of his art was amazing, unapproachable. Hand and eye never erred; his successor in the presidential chair—no mean judge—declared that he never saw a line of Millais out of drawing; and another fellow-artist adds that "he *could not* see tint, however subtle, incorrectly." Masterful in his art, as in his life, he has been described as "a colourist, not so much by selection as by his power of forcing the colours before him into harmony."

One cannot imagine such a man spending five years over a single picture, as the true Pre-Raphaelite, Holman Hunt, did. Deep premeditation, long and laborious preparation, elaborate revision, were things alien to his nature. When he failed—as fail he did sometimes—it was because he was balked of his first spring. "I've painted good pictures and bad ones too," he said; "but the bad ones have invariably cost me more time and pains than the good ones." Swift to imagine, he was swift to execute; in his later years a large portrait would be finished in a few days; the sittings for his best known likeness of Mr. Gladstone only occupied five or six hours altogether. Naturally, the total output was enormous; Mr. Spielmann catalogues 351 oil paintings alone; and to these must be added some fifty water-colours, and hundreds of black and white drawings. In this connection it must not be forgotten that he was one of

Sir John E. Millais

the founders and finest exponents of the modern school of book illustrators.

Simply to give the names of the most important among Sir John Millais' works would be a long business, and surely a superfluous one; for are they not household words, as universally distributed as the English language itself? "Cherry Ripe" has been encountered in a Tartar hut, and "Cinderella" in the house of a Samoan chief. The mere mention of "The Huguenot," "The Carpenter's Shop," "The Vale of Rest" (his own favourite), "Ophelia," "Chill October," and a dozen more, will call up a definite vision to the eyes of nine people out of ten. A certain kind of popular vogue is cheaply won, and may be as cheaply regarded; but such popularity as this is not to be ignored in estimating the value of a man's work. Art criticism seems as out of place here as literary criticism in the case of Dickens. But if the critics are allowed to have their say they will tell us that something more than brilliant executive power and facile vision is demanded of the supreme artist; and that the informing, illuminating ideal, single and omnipresent, was wanting here; he set his face towards no steady goal, he was content to paint and be happy. They will tell us that his was the imagination that sees old things freshly rather than that which creates new worlds of delight; that his landscapes were faithful transcripts rather than interpretations of Nature; that his portraits were wonderful renderings of character, but stopped at that, leaving unrevealed that innermost essence which lies deep below all character; that, in short,

Millais was a consummate craftsman, but no poet; an observer, not a seer. Many have pointed, with a sad might-have-been on their lips, to the work of his Pre-Raphaelite days, the elaborate, painstaking minuteness of which contrasts so curiously with the broad bold handling of his after-work; and some have even accused him—unjustly as we know—of deliberately abandoning his convictions in order to join in the hunt after popularity. Others have traced the more vivid imagination and deeper purpose they discover in this earlier work to the influence of his associates, Rossetti and Holman Hunt. In this they may be mistaken, as his son declares they are; and it may be that the poet who is said to die young in most of us, wasted somewhat and grew dim in the Millais of later years. That he did not quite perish till the end, let that wonderful "Speak! Speak!" of 1895 bear witness. But, after all, if the brilliant promise and the brilliant achievement do not match, "brilliant" remains the epithet for both; and those who are content to be thankful for good work, of whatever kind, whether poetry or honest prose, and wherever found, will quarrel neither with the Millais of "Lorenzo and Isabella" and "Ferdinand lured by Ariel," nor with him of "Bubbles" and "Cherry Ripe." The popular taste is not always altogether wrong, even in matters artistic; and whatever faults or limitations critics may discover in the work of Sir John Millais, the man who lived so sincerely and laboured so unceasingly for the wholesome delight of thousands, gentle and simple, can hardly be said to have mistaken his aim in art, or left his life-mission unfulfilled.





A CHILD'S IDEA OF LIFE

ILLUSTRATED BY THIRTY-TWO DRAWINGS SELECTED FROM OVER A THOUSAND MADE BY LONDON SCHOOL BOARD CHILDREN WHOSE AGES RANGE FROM THREE TO SEVEN YEARS

HOW much a young child notices is often the cause of great concern and sometimes of discussion amongst its parents and near relatives. How gladdened is a mother's heart when she is able to tell her callers that baby's just beginning to notice things." The child's eyes will follow her round the room during the pursuit of her household duties, and will glisten with delight when the gas is being lighted. But what forms are conjured up in the mind of the child when it observes these objects none can tell with any certainty. That they are but vague we shall endeavour to show; that the power of observation is not yet sufficiently developed in one so young it is needless to say; but it is interesting to note how much children really do observe.

One of the best methods of testing a child's power of observation is by means of drawing from memory. Place a pencil in

the hands of a child of two or three years, and he or she will begin to scribble with it, "making believe" to be drawing something or other.

A class of Board school "babies" was asked to draw a man, a clock, and a horse. These children aged from three to three and a-half years. One boy, barely three years of age, produced the accompanying — A being the clock, B the man, and C the horse.

When you are informed that A is a clock you can make



FIG. 1

Artists in Embryo

yourself believe it, as also the man who, you will notice, has only one leg, no body, but two big ears on the top of his head. The horse of our embryo artist is truly a wonderful creature, having four legs attached to the body out of the fourth of which two more spring, and a tail in the centre of the back.

The class referred to consisted of over eighty children, sixty-five of whom drew



FIG. 2

the clock as typified by fig. 2, drawn by a child of three years. No less than ten hands has this clock. This great error of observation has its excuse, for no doubt the child wished to convey the idea that the hands moved round, and so shows us the hands in various positions. The same excuse may be made for another boy in the same class, Master Venables, aged four, who

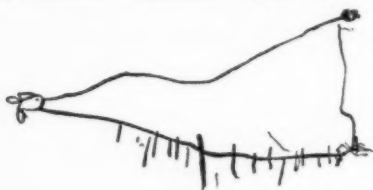


FIG. 3

draws a horse (fig. 3) with innumerable legs. The drawing of a man gives the child more scope, the greater part of the class referred to drawing him with a head and two legs, ignoring the fact that man possesses a body (fig. 4).



FIG. 4

However, one boy must have considered that the above-mentioned parts of a man were not sufficient, with the result of fig. 5, where we have a man with a head, four eyes, and two bodies. This boy, aged four, was somewhat original, not only in giving his "man" four eyes, but he was the only child in the class who drew the man with two bodies. He evidently wished to imply that the man had a waist.



FIG. 5

A class of older children, ages five and six, drew pictures of a man, a dog, and a train. Strange to say, the train came out best, illustrating the truth of the old proverb, "Familiarity breeds contempt." We



FIG. 6

will give an example of the trains drawn later on. Look at figs. 6, 7, and 8, the attempts made to draw a dog. Fig. 6 is truly astonishing. This poor dog, of the Dachshund type, does not boast of a body, and



FIG. 7

has a head quite out of proportion to the other parts. No. 7 has but six legs, two front and four hind—very much behind. Certainly not much can be said for the powers of observation of this artist (aged four), but the top part of the head and



FIG. 8

the curly tail are really well thought out. Why Alfred Mann draws his dog with two heads, with one eye in each, no one but himself is ever likely to know, except that perhaps he had lately been taken to Barnum's!

When drawing the human figure, legs and arms present great difficulty to the child, and in figs. 9, 10, and 11 we have three examples. In fig. 9 they are all springing from the same point, and it would appear at first sight as if this monstrosity of a



FIG. 9

Artists in Embryo

man had four legs. But no. Two of them are arms, for notice the five fingers clearly defined. In fig. 10 we have fearfully long arms springing from the cheeks, and in



FIG. 10

fig. 11 both are coming from the same side of the body. In every case except in one hand, of fig. 11, the fingers are clearly shown; a point seldom forgotten by child artists. Perhaps the hand is meant to be closed.



FIG. 11

The double face of fig. 10, being both front and side face, is remarkable, and we shall deal fuller with it later. This illustration, as well as fig. 11, is from a drawing by a girl, and brings us to two interesting points: (1) A child's idea of the difference in the outward appearance between a man and a woman, and (2) the position of the head and

eyes relative to the other parts of the body.

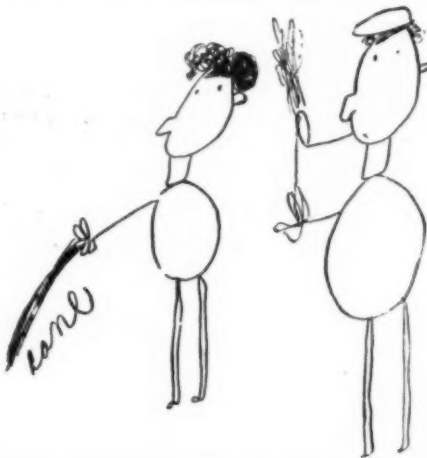


FIG. 12

We will take them in the above order. As already stated, fig. 10 is drawn by a girl, who herself labels it "Me."

From her own drawing it appears she favours the rational dress, but those who know her declare she always wears a skirt.

The same may be said of fig. 11. In a class of thirty-eight girls aged seven and

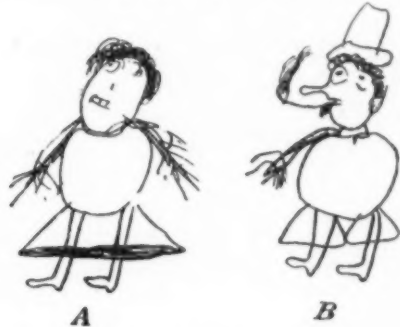


FIG. 13

eight, twenty-eight drew the woman without a skirt, and made hardly any difference between a man and a woman except in one instance, where the woman (evidently the teacher) held a cane, and the man was smoking a pipe. This drawing, which we produce herewith (fig. 12), is also the work of a girl. Four drew the woman in a skirt, but with the legs showing through it as shown in fig. 13. The same artist draws a man (fig. 13) with trousers of skirt-like shape.

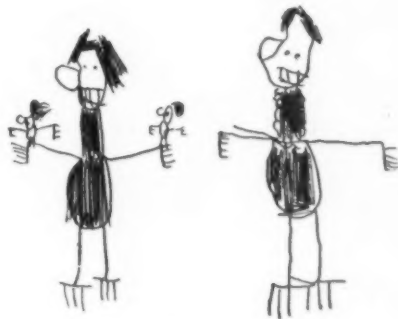


FIG. 14

A very comical drawing of a man and a woman was made by a girl aged six, and is reproduced in fig. 14. There is practically no difference between the man and the woman; each has feet and hands like garden rakes, and the figure on the left

Artists in Embryo

(the woman no doubt, from the long hair) is holding in her hands two dolls. You will notice that the dolls are standing on the edges of the hands.

Fig. 15 is a very remarkable drawing of a woman and a man, by a girl aged seven.

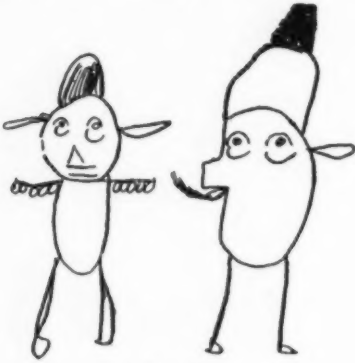


FIG. 15

The left-hand drawing is that of a woman and the right-hand is a man. You will notice that the arms come out of the neck in the woman, but the man is minus arms. This child was the only one of eighty who omitted any of the limbs from their drawings. Moreover, the reader will

notice that the woman has a head and a body, whilst the man has no body; but to recompense for this loss he has an enormous forehead. He smokes a pipe through his nose, and when he is turned sideways his eyes turn frontwards. This brings us to the second of our interesting points, viz. the position of the head and eyes with relation to the other

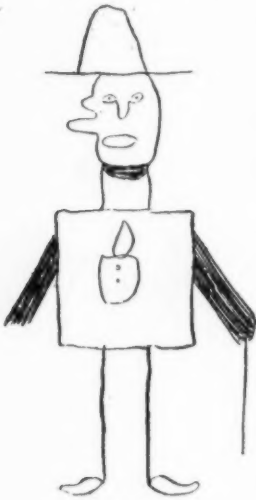


FIG. 16

parts of the body. In fig. 15 the man is drawn side-faced, but he is shown with two eyes. Not one of the class of eighty drew a side face with only one eye. "Man has two eyes,

and so they must appear in the drawing," must have been the thought of each juvenile artist. Figs. 10, 12, 13, and 14 amply verify this. Not only did they all draw two eyes,

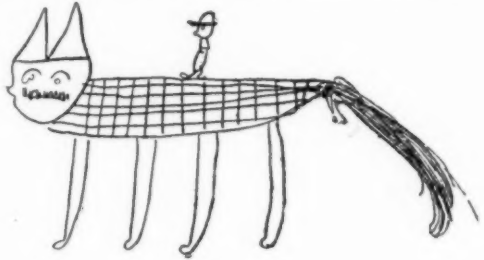


FIG. 17

but one pictured a side-faced man with two noses, two mouths, and two eyes, one of each full face and one side-faced. The candle on his waistcoat must on no account be overlooked. Every child in a class of forty-one told to draw a man on horseback drew the man *standing* on the horse, one (fig. 18) drew the man standing on the *side*

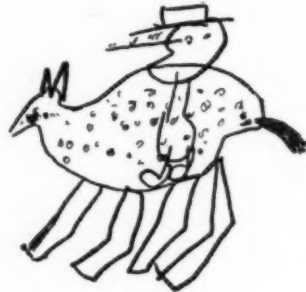


FIG. 18

of the horse. It is very rarely that a child draws the man on the horse with only one leg showing. The rider is always plumped down on top of the horse or is hanging by its side.

It is the same with a man in a cart (fig. 19) and a driver in a train (fig. 20). This train is the one referred to earlier in the article. In fig. 19 we have a horse and cart with the man driving. The horse has but three legs, and the cart,

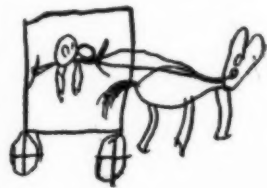


FIG. 19

Artists in Embryo

with two wheels only, is evidently made of glass, for the driver, a man with an enormous nose and no body, is seen holding the reins by his nose inside the cart.

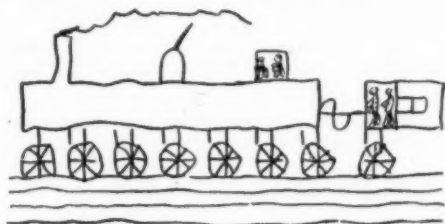


FIG. 20

This little picture combines many wonderful and interesting points, for besides those above mentioned we find the horse has two eyes placed vertically, and that its tail rests inside the cart.

In the case of the railway engine we have more examples of men standing or sitting in various places. The child endeavours to show the rails



FIG. 21

and has correctly drawn two sets. But, however, the engine is wrongly placed on the line, for the side of the engine facing the artist should be on line 3, not line 4. The locomotive itself, with the stoker and driver perched in a glass cage on top, has a fair number of wheels, whilst the guard's van has to be content with one wheel only. The arrangement for coupling is very well drawn, although out of all proportion.

A bicycle, though a very common object nowadays, presented great difficulties to a class of sixty-five children, not one of



FIG. 22

whom drew a cycle with any semblance of a diamond frame, but none forgot the two wheels—in fact they began to draw them first. Two children drew tandems, only sixty per cent. pictured a bicycle with cranks and pedals, and thirty per cent. omitted the saddle.

Fig. 22 is a typical example of their drawings—two wheels, a bar or two for the

frame, and a handle bar. A fantastic design is fig. 21, which looks more like a sofa than anything else, and resembles a cycle only inasmuch as it has two wheels.

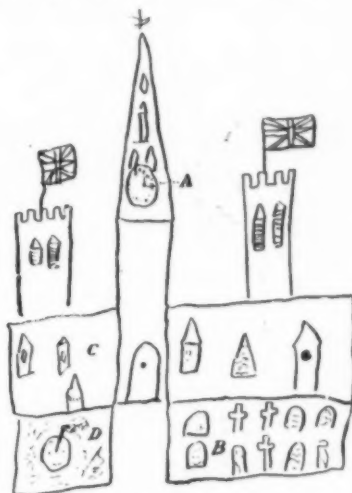


FIG. 23

Second to drawing human beings, the child is at its best when drawing a house or a church. Look at fig. 23, which is really a creditable production for a boy of six and a half years, except that the perspective is altogether wrong. Hardly a detail is missing. A the clock, B the churchyard with the gravestones, C the vicarage next the church, and D the vicar's garden—all are there.

As in the case of a man on horseback (figs. 17 and 18) and the woman in a skirt

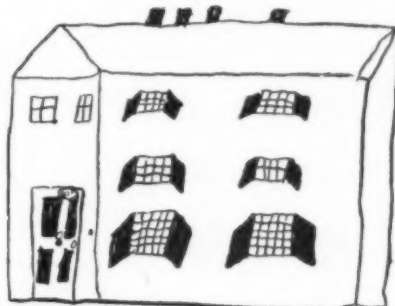


FIG. 24

(fig. 13) it is the desire of the child to show you everything possible, so it is when a house is being drawn. The child puts the house on the flat and represents the front and

Artists in Embryo

the two sides as well as the roof. Fig. 24 is a good example of this. Here it is again well to notice the detail, the panes of glass, the shutters in fairly good perspective, and the house number over the door, the keyhole, and the door handle.



FIG. 25

Another example of the lack of proportion may be cited with reference to the drawing of the human figure, and that is with respect to the features, which are apt to be very much pronounced, especially the nose, when side-faced drawings are made. The eyes also have their share, and children have been known to make the eye as large as the head when drawing a side-faced figure with one eye. In fig. 25 we have an instance where all these features are much enlarged, and it is interesting to note that there are six fingers on one hand and eight

on the other; a most unusual occurrence in children's drawings, where the correct number of fingers is nearly always carefully represented.

In fig. 26 we have another example of special pronouncement of several of the parts of the body, and this time it is in the case of the arms, which are enormous fin-like limbs with huge fingers.

In conclusion, it is perhaps necessary to add (in case there are some of our readers

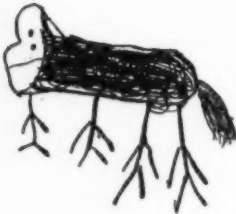
who may believe that the above illustrations have been drawn, not by young children, but by a professional artist of the Phil May type) that all the drawings reproduced on



FIG. 26

the foregoing pages are a selection from over a thousand similar drawings which the writer obtained from children in Board schools in various parts of London.

WALTER DEXTER.



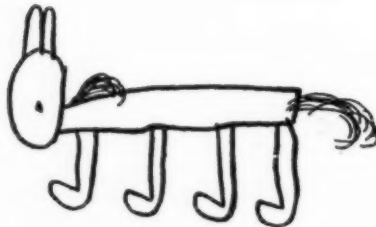
A HORSE



A WOMAN



A MAN



A DOG

The Real Ghost

BELMONT TOWERS was the name of a castellated mansion beautifully situated on the highest ground in the broad acres of Sir Rolf Randulf. In former days it had been a castle of some strength, as was apparent from the thickness of its walls, the depth and breadth of its moat, and the strategic value of its situation; but now modern windows had taken the place of narrow loopholes, the moat was dry and grass-grown, and some of the rooms in the interior had been enlarged by biting into the thickness of the walls.

Though many of the modern additions had been made more for convenience than with a view to harmony with the ancient pile, nevertheless it was clear from the shape of the whole that the original design had been to build a perfectly round castle. This naturally gave to the rooms a peculiar shape. Many of them were eccentric and interesting, especially those which had been enlarged by recesses contrived in the walls, which were eighteen feet thick.

As all the country, at the time of our story, was covered in snow, and there was a bluff wind abroad, the interior of the Belmont Towers was more cosy than usual. A large Christmas party were staying in the house, and on this particular evening they were dancing in the spacious ball-room.

The old mansion was so full of gaiety that the spirits of Sir Rolf's ancestors and of the famous guests they had entertained in their day might well have been attracted by the abounding life, health, and good spirits of the time.

If these illustrious old worthies had deigned to pay a visit to this castle, so famous in legend and so full of the memory of great projects and of mighty deeds, they would not have stayed in the ball-room, where the physical vigour and motion would have painfully reminded them of their own ghostly condition, but they would have flitted away down the corridors towards the private den of Sir Rolf. This was a small room, formerly used for private conferences of importance, which led out of one corner of the library and looked forth upon the old battlements, where the same thirty-pounders which fired a salute to

Nelson, as he left to take command of his fleet, were still grimly mounted. The room was wainscoted in oak, the walls were hung with historical pictures every one of which had some connection with the castle, and the furniture was antique yet comfortable.

On this night of the ball the ghostly ancestors would have found the den invaded, and Sir Rolf himself made a victim of his own good humour. There was a circle of chairs round the fire, and in the midst was Sir Rolf, his noble and genial face fitfully lighted up by the fire. Sir Rolf, after opening the ball in the courteous manner of a past generation, had slipped away here to have a quiet smoke, with no other light than that of the fire. Presently a boy of twelve or thirteen—a certain Master Gerald Rokeby—had slipped in beside him and had seated himself on the hearthrug. Now the reason the boy had come in so quietly was that he knew the old gentleman's head was full of stories of the castle's former days. It was not long before the boy, with considerable skill, succeeded in eliciting one of these tales, and, before the story had proceeded far, one and then another, seeing what was going on, dropped into the library to hear. One of these was a strikingly handsome lady of about twenty-nine or thirty years of age, whose husband at that moment was discussing stocks and shares in the billiard-room. Her name was Mrs. Clarkson; and it was well known among her friends that the sadness observable behind her gayest manner arose from the memory of her son, who had died a year before at the age of nine. Every one liked her on account of the natural charm of her manner; but no one was sufficiently intimate with her to understand the devotion with which she cherished the memory of her dead son.

If any of that little company around the fire had turned their heads round during the telling of the legend, they might perhaps have seen the ghostly ancestors, assembled behind them, nodding grave approval towards Sir Rolf as the incidents of the story were passed in review. "Yes," Sir Rolf was saying in answer to a question from Gerald, "this castle dates back to the time of the

The Real Ghost

wars of the Roses, and, as I was saying, the knight who owned it was away fighting for the house of Lancaster when a strong body of Yorkists suddenly appeared and demanded admission. But Lady Margaret refused, and ordered her small garrison to the battlements and to the loopholes.

"Now it so happened that the Lady Margaret had a son, a stalwart boy of fifteen, who had been much disappointed at not being allowed to go to the wars with his father. This boy was not physically as strong as many of his companions, but he was their superior in every sport and feat of arms which required dexterity and skill rather than force. He ran with the speed of the wind, and his arrows rarely missed their mark. When the drawbridge was up, and defiance given to the Yorkists, this boy inspired his men with his own courage and gave the Yorkists good cause to dread his unerring bow. He could not well support the heavy plate armour of the time, and so he wore only a finely wrought jerkin of chain mail.

"All the incidents of that famous siege have not come down to us, but a few facts emerge from the confusion of many accounts." Here Sir Rolf waved his hand towards the well-lined bookshelves and continued: "Soon the Yorkists delivered a general assault in which they succeeded in bridging the moat and in shattering a small iron-studded door in the walls on the south. This door was meant to enable foraging parties to regain the castle without the necessity of having the drawbridge lowered. The door was naturally strongly defended by many loopholes, and was furnished also with a portcullis.

"The Yorkists were well led, and it was evident from his costly armour that their commander was a noble of importance, probably a scion of one of the best families, sent out to win his spurs on this enterprise. The assault on the gate was so well planned and courageously executed that it was on the point of success when an unlooked-for incident made the Yorkists draw off in consternation.

"Lady Margaret was put on her mettle when she saw the determination of the Yorkists. She encouraged the little garrison, however, to the best of her power, and summoned all that could be spared from the walls to repel the enemy when they should break through the door in the wall. Her son, in the meantime, had posted himself at one of the loopholes commanding the

approach to the door, and had already slain many of the foe, when he espied the young Yorkist commander coolly directing operations from the other side of the moat. This sight filled young Rolf with rage, and he fitted an arrow carefully to his bowstring and fixed his keen eyes on the figure across the moat; but nowhere could he see any gap in the complete armour of the Yorkist. Many arrows from the other loopholes fell on him and only glanced harmlessly off.

"Rolf resolved to wait his chance, and knelt there as if cut in stone, watching every movement of the Yorkist commander. In the meantime the gate was stormed and a savage fight was going on through the portcullis. The battering-ram which had driven in the gate was brought to bear on the portcullis, and, after much loss of life, the enemy managed to break through it by main force. The Yorkist commander, when he saw this, raised a shout of triumph and waved his sword above his head. At that instant young Rolf loosed his impatient bowstring and the arrow buried itself nearly to the feathers in the armpit of the triumphant Yorkist. This catastrophe took the heart out of the attack for the moment, and a retreat was sounded.

"When the Yorkists found that the wound of their commander was fatal, their rage knew no bounds, and they vowed a solemn vow of vengeance on the young Rolf.

"They only waited to obtain the necessary rest after their toils to renew the combat at the same vulnerable point. This time, in spite of every effort of the garrison, the castle was carried and the survivors were thrown into the dungeons, except Lady Margaret and her son, who were put in the guard-room and every means of escape carefully taken from them."

Here the old man paused as if half unwilling to go on with his story; but Gerald was inexorable.

"What did they do then?" he asked. Mrs. Clarkson was evidently thoroughly interested too, for she inquired anxiously, "What did they do to the boy?"

It was extraordinary that a story told in rather a prosaic manner by the genial old gentleman should have such an effect on these two, the boy Gerald and Mrs. Clarkson. The rest of the company were pleased enough that a tale was being told, but they only enjoyed it in a passive sort of manner. One old dowager, indeed, was gently nodding, for her mind was never brought into activity except by miscellaneous small-talk.

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Old Sir Rolf cast an affectionate eye on his books and then on his small audience. He was not sufficiently interested in the old dowager to care whether she slept or not ;

"The very evening of the day on which the castle was taken they brought the boy and his mother down to the banqueting hall, which is now the ball-room. Lady



"THIS IS THE BOY WHO SLEW THE YOUNG LORD VERNON"

but he was highly gratified to see that he had obtained the interest of Gerald and of Mrs. Clarkson, so he cleared his throat gently and, fixing his eyes on the fire, continued :

Margaret, as her scornful glance swept round the room, was surprised to see that all the men were sober and solemn, though they had been drinking freely. They were all in armour too, for they had only

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removed their helmets. She caught her breath and put her hand nervously on her son's shoulder when she saw this, for her heart told her that it boded ill. The next moment, however, she was again herself and swept up the hall with as stately a grace as if the occasion were festal.

"A long table ran the whole length of the room, filled on each side with grim and armed men, while at the end of the hall, on a raised dais, was a small table placed across the hall to accommodate the leaders of the troop. In the place of honour in the centre of the table was a grim-looking man with a jaw too massive even for his well-shaped forehead. His moustache was long and drooping and his eyes glittered with a grey and cold light.

"Before him, in the space between the dais and the long table, Lady Margaret and her son were brought. He made a gesture towards them, and, addressing his men, said:

" 'This is the boy who slew the young Lord Vernon —' The rest of his words were drowned in a storm of execrations. They all had been devoted to their dead commander with the uncompromising fidelity of dogs, and now their rage at his death was blind.

"This tremendous demonstration roused the spirit of young Sir Rolf, and he said in a clear voice, which they all heard when the tumult lulled:

" 'I know I shot him, but it was in fair battle, and you have your revenge in this, that you have taken my father's castle.' Here tears rose to his eyes, and he stamped his foot on the floor; but the tears were of rage and not of fear.

"This speech infuriated the men, and one of them gave the boy a savage blow on the face, which felled him to the ground. The boy rose bleeding and beside himself with fury, and would have flown upon the man had not his mother thrown herself in his way.

" 'Sweet son, be patient,' she said; 'what can you do against these men? Why run upon your death and leave me alone here?' This touched him, and with a strong effort he choked down his feelings. His mother then appealed to the leader on the dais: 'What can you mean by bringing us to be insulted here? We are captives of war, and you sully your own name by this foul play.'

"The man actually seemed to be feasting his eyes on her distress, and only when his

eye quailed before her haughty look did he order them to take her away. At this she cried out in terror: 'But you are not going to separate us, are you?' With clenched hands she stood for a moment perfectly still while thoughts and fears chased themselves through her brain. Then a sudden instinctive fear overcame her, and she flung her arms around her son and cried in a passion of supplication, 'What are you going to do to him?'

"No one answered her, but they unwound her arms from the boy. She struggled and fought, for she saw their purpose in their faces. She broke away from them, and, flinging herself down before the dais, besought the leader to spare the boy. 'This is not vengeance—it is murder!' she screamed.

" 'Remove the woman quickly,' he said; 'she shakes our purpose.'

" 'Oh, if you had not a heart of stone,' she sobbed, 'the boy himself would shake your purpose.' Then she drew herself up to her full height and hissed between her teeth: 'But, I tell you, if you touch a hair of his head you'll have to reckon with the vengeance of his father—Ah—villains!' And they dragged her from the hall.

"At the same time the boy had been firmly secured. Resistance was useless, so he never said a word, but tried to nerve himself for the worst.

"There was a dreadful deliberation about the proceedings of these men. They were not acting on the feeling of the moment. They were carrying out the details of a horrid vow.

"At a sign from the leader a number of them rose and, seizing the boy, led him out of the hall. The rest of the company sprang to their feet, filled their flagons with wine, and waited in silence with their ears on the strain. They could hear the steps retreating towards the battlements. Then there was a silence more dreadful than any noise. Scarcely a man moved. Suddenly they all started guiltily, for they heard a distant scream. Soon after the men who had gone returned, but this time without the boy.

" 'Is it done?' asked the leader in a husky voice.

" 'It is done,' replied the men as they rejoined their companions.

"Then all together they raised their flagons, emptied them, and sat down."

Gerald was sitting on the hearthrug, gazing into the old man's face, entirely

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absorbed in the story, and the reason of this was more the manner in which the old man spoke than anything else. He told the story almost as if it had been about his own son, and it was this way he had of speaking that appealed so powerfully to Mrs. Clarkson too. She forgot that she was only listening to a tale which, though probably true, yet was about times long dead. She herself seemed to be Lady Margaret and the young Sir Rolf her own son. The boy Gerald, who looked doubly handsome in his present attitude, was the substantial figure about whom the memories of her dead son clung with a passionate desire to find a living representative of the dead.

Even the dowager was awake now, and all the little company waited for Sir Rolf to finish, with an uncanny feeling that he believed all these events to have actually happened in the very castle in which they were sitting. He ought to know, too, for was he not a patient student of the past records of the place? The room being dark except for the fire made the story seem more actual.

"Yes," Sir Rolf continued, as if answering questions which had not been put to him, "the boy was hanged from the battlements, and when the Yorkists went their way his mother found him there and went raving mad. She wandered up and down the castle calling for him, and when the men buried the body she begged them to give him back to her so piteously that she moved the soldiers' hearts. Then she would break off into denunciations of the men who had slain him, and especially of their leader, whom her soul abhorred with a perfect loathing. Her attendants could do nothing for her, as she would neither eat nor sleep, and finally, her body being worn out with sorrow, she died. And afterwards, they say, her ghost wandered in the part of the castle where her son's room was, never making a sound, but sometimes to be seen moving with a sad step down the corridors with her arms outstretched, as if feeling her way, or as if ready to welcome her son if she could find him."

"What part of the castle?" asked Gerald.

"As far as I can discover, the boy's room was in the oldest remaining part of the castle—the room we now call Wellington's room—because he used to occupy it whenever he stayed here."

"Why, that's the room I sleep in, isn't it?" asked Gerald.

"Why—yes—I think it is," replied the old man with hesitation, thinking he had made a mistake in answering the boy's question. "But, you know," he added, to reassure him, "the ghost has long ceased to walk, and has not been heard of for a hundred years or more, except perhaps occasionally at Christmas——" Here the old man bit his lip and added hastily: "You know people are always reviving dead ghosts, and so this one is revived now and then; but there is really nothing to be nervous about, for no one whose evidence is worth anything has seen this ghost, you may be sure." Old Sir Rolf stopped here, for he was getting very mixed between his desire to remove any fear from Gerald's mind and his unwillingness to tell lies; but Gerald himself reassured him.

"Oh! don't be nervous about me. I don't mind ghosts, and if one came——"

"What would you do?" asked Mrs. Clarkson.

"Oh," said Gerald, with a sigh, which distinctly indicated that he was screwing up his courage, "I should try and not mind."

At this the company smiled, and gradually broke up.

"Good night, Mrs. Clarkson," Sir Rolf said cordially.

"Good night, Sir Rolf," she replied; "I must thank you for your story. It makes one a little sad, doesn't it, to think how much suffering these old walls may have seen."

They were alone together, as the rest of the company had disappeared.

"Yes," Sir Rolf replied, "the history of this castle is full of stirring incident, and I like to speak of it to anyone who is really interested as you seem to be, but when I told a ghost story I forgot the boy and the effect it may have on his nerves."

"Oh, the boy is all right," replied Mrs. Clarkson; "it would take more than a ghost story to really frighten him—it is much more likely to frighten me."

"He seems to be a boy of blood and sense," mused Sir Rolf, with his keen and benevolent eyes fixed on Mrs. Clarkson's face as if he were studying it, "and I suppose, then, that I must transpose the feeling and say I should be sorry to frighten you." He smiled and bowed in an almost frisky manner.

"Oh, don't mind about me, Sir Rolf," replied Mrs. Clarkson, "for the worst it could do to me would be to make me walk

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in my sleep—a thing which I have not done for years."

The happiest Christmas evening comes to an end, and so it came to pass that at about half-past one in the morning the last guest departed, and the house party retired to their rooms. Gerald had gone to bed at about twelve o'clock, and the sound of the place being locked up after the departure of the last guest woke him up.

He admired the moonlight streaming through the frosted panes of his windows, and he felt so particularly comfortable in bed that he smiled from sheer satisfaction. Then suddenly the story he had heard flashed upon his mind all together, with every detail standing out clearly as if he were looking at it in a picture. He had no sensation of retracing the course of the story, for he saw it all at once. He shuddered as he thought of the boy being hanged from the battlements, and he looked with a fascinated eye at the window, full of dread lest he should see a shadow on the pane caused by the swinging body. After this it was with a sense of relief that he thought of the ghostly mother moving through the corridors seeking her lost son, and never to be comforted by finding him. He was not afraid of the ghost, but he shivered whenever he thought of the fate of the boy. We say he was not afraid of the ghost because he told himself so, stoutly, and we must believe him; but still his eyes did seem larger than usual as he looked round the room in every corner, and he started as he remembered that this was Wellington's room, and there—he thought he saw the warrior's shadow sitting in that high-backed chair.

Then he pulled himself together. "This is getting too strong," he said; "if I go on like this I shall make a fool of myself. I wouldn't care if all the ghosts in the world were to come and sit down round my bed and stare at me, I should still go to sleep; so there!"

After delivering himself of this defiance he made a determined effort to go to sleep and, contrary to the usual experience, succeeded, more because he was very tired than for any other reason.

How long he slept he never could make out, or whether he was awake or not he could hardly tell himself, but after a long while he seemed to hear a sound as of a rustling dress in the corridor. He lay quite still in his bed, with his eyes fixed on

the ceiling. The sound approached his door. Still there he lay as if fascinated, not daring to look towards the door. He felt instinctively that there was some one or something in the room, though there had been no sound of the door being opened. This feeling woke him, and, bringing all his determination together, he forced his eyes off the ceiling and stared wildly round the room. His eyes dilated with horror, for there was the very shadow on the frosted window—the shadow he had dreaded he might see. He would have screamed with terror had his eye not been caught by a white and ghostly figure passing across his room with the slow and stately steps of a lady of the ancient time. Her hands were outspread, as if she were seeking some one lost, and on her face was an expression of such hopeless grief and longing that his fear suddenly gave place to pity, for the lady was very beautiful. She moved towards the window where the shadow was, and seemed to look through it with a steadfast eye glazed with sorrow. Then she turned her head towards Gerald.

His heart leapt within him, for, though her whole face was so expressive of sorrow and love combined, yet she did not seem to see anything with her eyes, which were turned towards him—not so much because she saw him as because she had felt him looking at her.

Then she advanced towards him, and he forgot the sinister shadow on the pane. He forgot his horror and lay perfectly still, almost hoping that she would not leave without coming nearer. She looked so beautiful and kind and sad that the boy was moved till he felt a lump in his throat, of which he was not ashamed. She drew nearer, and he held his breath lest he should disturb her and frighten her away. This apparition seemed no more to him a ghost—a thing of terror—but a dream—a fair dream—and his eyes glistened as he watched her.

She came to his bedside and bent over him. He felt her long hair fall around his face. She was saying something to herself, but he was too excited to be able to distinguish the words, though somehow the sense of them seemed to sink into his heart. He knew the lady felt that she had found her son after centuries of wandering and seeking. He felt that she doubted her own joyful discovery, and that was why her hand strayed over his face with a touch so light and questioning. The feel of his hair, which was short and curly, seemed to con-

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vince her, for she sighed as he had never heard anyone sigh before, and sinking down she kissed him lightly on the cheek. He forgot everything in his love and pity for the lady, and he flung his arms around her neck. Then he never could remember what happened, for, when he touched her, the lady started as if with fear, and disengaged herself from him so deftly and

laugh at him for believing that Lady Margaret would come to him, "and therefore," said he to himself, "I shall never breathe a word of this to anyone, for if any one were to laugh at me because of it I should want to kill him."

He faithfully kept his vow and never breathed a word of his experience to a living soul, though on the last evening



HE ONLY FELT
A HOT TEAR FALL
ON HIS FACE

quickly that he hardly knew she had gone. He only felt a hot tear fall on his face, and then she disappeared in a flash.

He lay long after this thinking, thinking and trying to remember. He tossed to and fro, but could come to no conclusion. Then suddenly, as if struck with a great idea, he lay perfectly still and gazed at the ceiling, deep in thought. He came to the determination in his own mind that if he were to speak to anyone of what he had seen he would only think him foolish and

before he went back to school he almost gave his confidence to Mrs. Clarkson. Somehow, he got on so well with her, and when, there being no one in the room, he allowed her to kiss him good-night and good-bye, he knew by a sure instinct that she would understand what he felt.

He resolutely held his peace, however, and carried away to school with him as his own private property a memory which he felt it would be sacrilege to betray.

LAURENCE M. GIBSON.

The Shipyards of the Thames



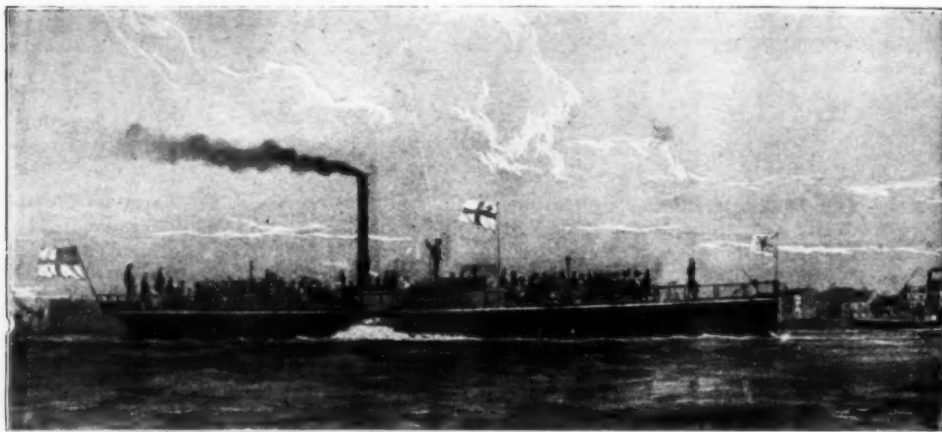
THE Thames was once our great shipbuilding river; it is not so now. It held its own fairly well so long as vessels were built of wood, but when wood went out of fashion the trade departed to the North, where iron and coal were closer at hand.

This occurred shortly after our builders awoke from the long sleep during which the Americans went ahead so conspicuously. The cause of the American triumph was clear enough to the shipowners, but the

builders were slow to move with the times. Passengers and shippers want speed, and, other things being equal, the fastest vessel will always get the pick of the trade. Further than this, the Americans discovered how to evade the measurement rules, and make their ships carry more cargo in proportion to their registered tonnage than those of British build. They thus effected an appreciable saving in dues and charges. And there was something else. "In considering," as Lindsay says, "the current expenses of a

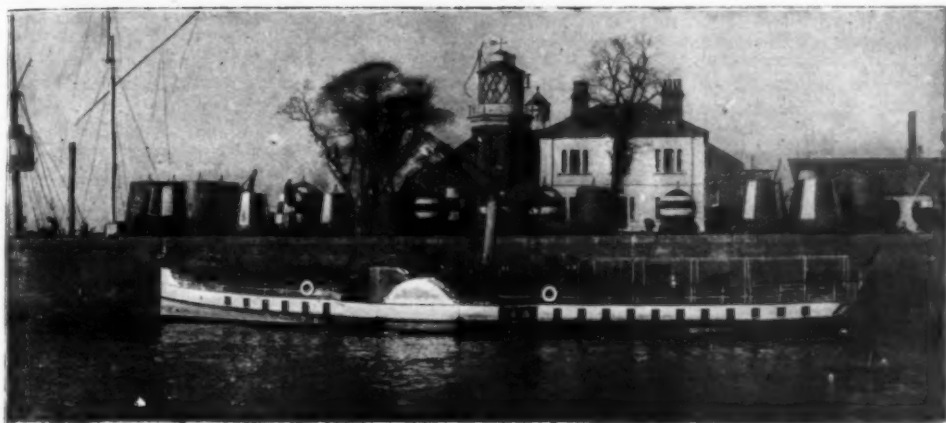
merchantman, manual labour is one of the most important items, and herein our competitors, by means of improved blocks and various other mechanical appliances, so materially reduced the number of hands, that twenty seamen in an American sailing-ship could do as much work, and probably with more ease to themselves, than thirty in a British vessel of similar size. With such ships we failed successfully to compete"—until we took to American methods and went beyond them on the lines which gave us the tea-clippers, and eventually produced that complicated box of machinery—the four-masted sailing-vessel of to-day.

The wood and the composite period came to an end; planking gave place to plating. Firms that are nearly forgotten, like Pitcher of Northfleet, Thompson of Deptford, and Fletcher of Limehouse dropped out. Green's gradually gave up building, except in a small way; Wigram's gave it up altogether, and but few lasted who had begun in wood and persevered in iron, or begun in iron under the new conditions. In 1866 the Millwall Ironworks were closed, owing to the Overend Gurney smash, one result of which was the sale of Samuel Gurney's place at West Ham and its being turned into a public park. Dudgeon's went, ruined by the unhappy launch of the *Independencia*, when the pile; crushed into her; Samuda's went,



"CITIZEN A," BUILT AT BLACKWALL FIFTY-FIVE YEARS AGO

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"ALEXANDRIA," A RECENT THAMES STEAMBOAT

owing to the son not liking the trade, or the look of it with labour troubles threatening in the immediate future. And now the only firms that can build a war-vessel are the modern Thornycroft and Yarrow, and the only one that can build an armour-clad is the Thames Ironworks, which has lasted on through all the times of trouble.

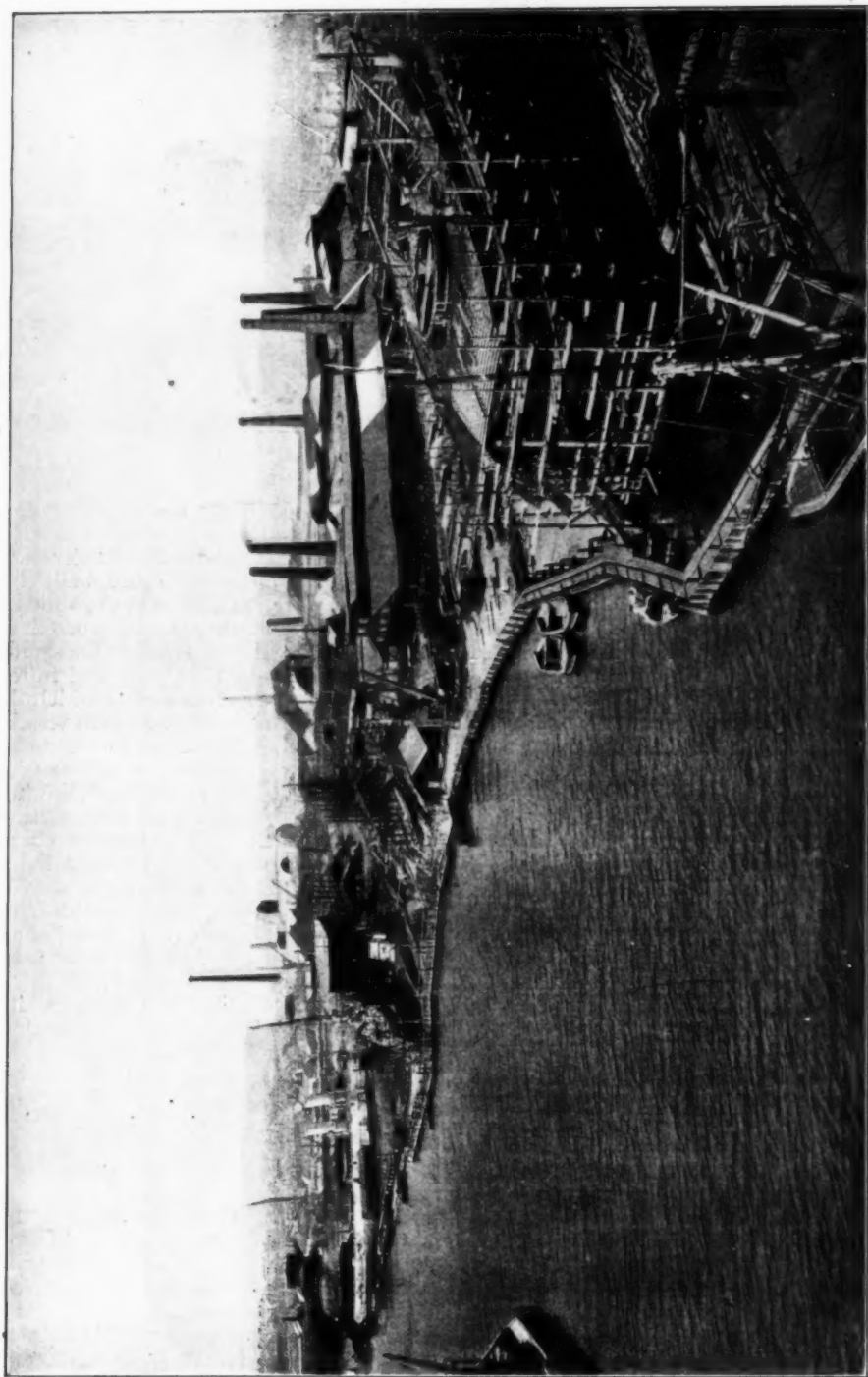
The Thames ranks fifth among our shipbuilding rivers. In 1897 its output was only 15,000 tons, as compared with 191,000 tons constructed on the Clyde, the Wear coming second with 103,000, the Tees third with 81,000, and Belfast Lough fourth with 73,000. But in numbers there is another story to tell, owing to Thames-built craft being mostly small. More sailing-vessels are still built on the Thames than any other river, and more vessels of all kinds with the sole exception of the Clyde. In 1897 the Clyde built 295 vessels, of which 97 were sailing, and the Thames built 208, of which 169 were sailing. Next, but a long way behind, came the Tees with 60 vessels, of which 10 were sailers, running it close coming the Wear with 58 vessels, all steamers; the fifth place being held by Belfast with 35 vessels, of which 22 were steamers. Most of these vessels were built of steel, but some were built of wood, the Thames building more vessels of wood than any other river—by way of survival—but they are all small, the average being only 53 tons, quite a different sort of craft in every respect to the frigate-built Indiamen of the Wigrams and the Greens. In short, the London waterway might appropriately be

called a boat-building or barge-building river, were it not for the Thames Ironworks.

Early in the thirties the fastest steamers of the port of London were built by Fletcher of Limehouse, whose superintendent, Thomas John Ditchburn, at one time an apprentice in Chatham dockyard, abandoned the old bluff bow and introduced the long, fine entrance, which is the distinctive mark of the modern vessels built for speed. These early steamers, plying mostly to Gravesend and Margate, were built of wood, but Ditchburn, following the experiments with regard to iron, saw that as a shipbuilding material wood was doomed; and, encouraged by John Penn of Greenwich, left Fletcher's in 1836, and, entering into partnership with Charles John Mare, set up the first iron shipbuilding establishment on the Thames, at Orchard Lane, Blackwall.

The "Orchard House" which gave its name to the lane was an old waterside inn, from the orchard of which the view extended right across Bow Common to Mile End Road. And all East Ham, West Ham, and Plaistow were marshes, cornfields, or market gardens.

Since then changes have indeed been many. Just beyond the orchard, where the fruit-trees bloomed in the spring and the grass sloped down to the creek which was, and is, the outlet into the Thames of the then silver Lea, was the little shipbuilding yard from which there was launched quite a fleet of small craft, among them, in 1846, the royal yacht *Fairy*, the first screw vessel introduced into the Royal Navy and the



BIRD'S-EYE VIEW OF THE THAMES SHIPBUILDING WORKS

The Shipyards of the Thames

only screw yacht ever possessed by the Queen until the launch of the new *Victoria and Albert* at Pembroke a few months ago. Machine tools in those days were few and primitive, and some of the contrivances used in building the little long-lived vessel provoke a smile. For instance, there were no horizontal punching-presses, and the tops of her frames had, owing to the limited headway below, to be hauled up through openings in the mould-loft floor.

Not long afterwards Mr. Mare, looking across the creek day after day, thought it a pity such a bare space should not be occupied, and made up his mind to start new works on it for making his own iron out of the best London scrap, which was then abundant. His partner by no means approved of the plan, and the partnership ended. Frog Island, as it was called, was not a promising site. At spring tides half the present shipbuilding premises were under water, and when Mr. Mackrow went across to put in stakes to mark out the first two slips, the rushes that grew on the swamp were up to his waist.

But Mr. Mare persevered and began business with eight river steamboats for the Citizen Company to work above London Bridge, four of them being built at a time, on each of the two slips. It will be remembered that the newest boats on the river were built last year in the same yard.

Soon orders for larger vessels came in freely, and in 1853 he launched the *Himalaya*, which was perhaps the best-known ship he built in his own name. In 1856, owing to the low price at which he took some fifteen gunboats and despatch-vessels at the time of the Crimean war, he was insolvent, and the yard became the property of "The Thames Ironworks and Shipbuilding Company," which was formed by Peter Rolt, his father-in-law, who was the principal mortgagee. Mr. Mare afterwards founding the Millwall Ironworks, which built the *Great Eastern*.

From this brief sketch it will be clear why the great Blackwall establishment, which extends over some thirty acres and employs about 3,000 men, is in two counties. The offices and naval architects' department are in Middlesex, on the site of the old yard of Ditchburn and Mare; the shipyard and engineering works are on the other side of Bow Creek, in the county of Essex; the creek, which at low water is a perfect wonder in the way of mud, being hereabouts the boundary of London.

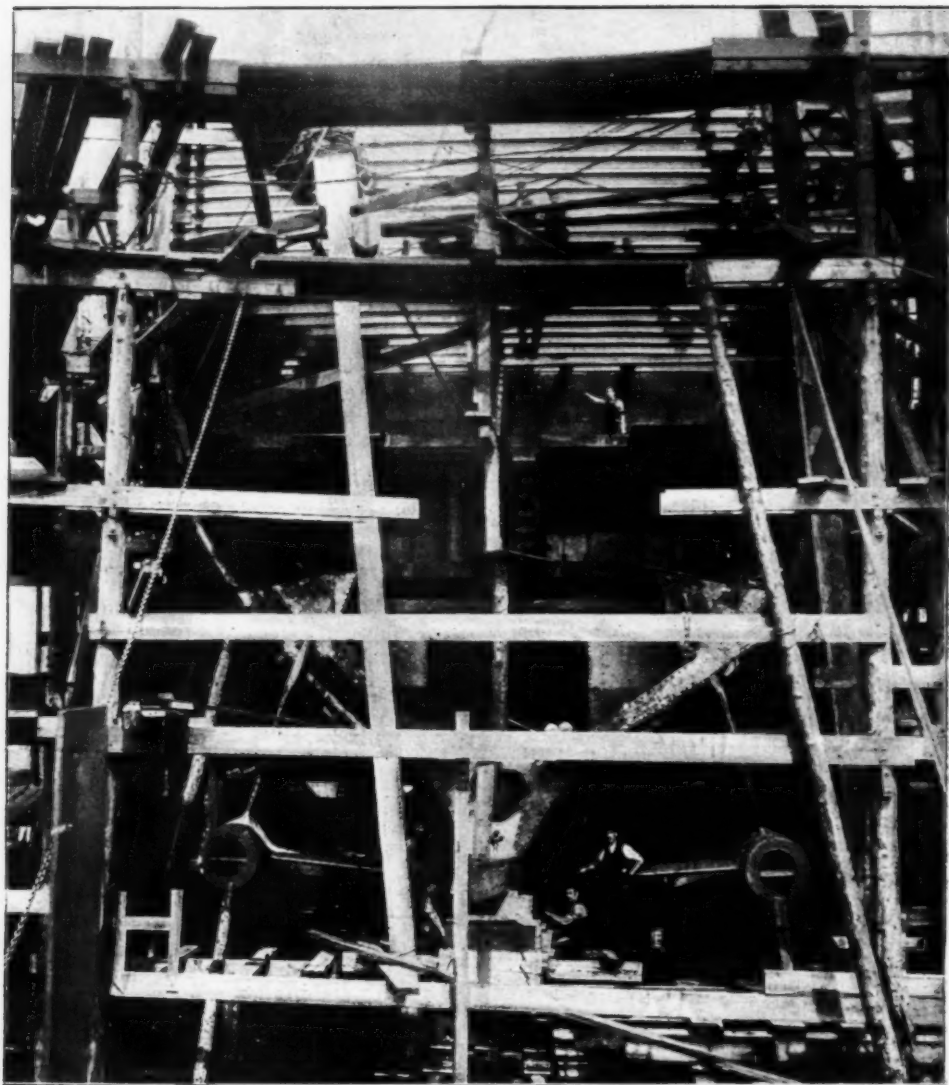
Great is the contrast between the two sides. In Middlesex all is quiet, save the murmur of the distant racket and clang in the works over the water. Here is the board-room, in which is a fine collection of models of many of the principal vessels launched from the yard. Among these are the famous *Warrior*, the first sea-going ironclad, perhaps the most difficult problem (as presenting so many new features) that the yard had to tackle; and, to say nothing of the samples of the middle period, here are the battleships *Benbow*, *Sanspareil*, and *Albion*, and the first-class cruiser *Blenheim*, with, of course, the royal yacht *Fairy* as a reminder of the early days. These are not all, be it understood, for besides them the yard built the *Grafton* and the *Theseus*, the *Minotaur*, and the *Superb*, and many others. Of foreign warships there are many, for besides the Japanese *Fuji* and *Shikishima*, the yard has built armour-clads for Russia, Germany, Turkey, and other Powers, and if we were to mention them all, and add the crowd of other vessels, we should fill more than a column with names.

A more interesting place than the board-room is the little shop close by, beneath the drawing-office, in which these models are produced. For while the full-sized ship is being built on the slip opposite, her model is being made here from the same plans—with all the fittings to scale, castings from patterns in just the same way—with such accuracy and finish that the cost of that of a first-class battleship such as the *Duncan*, now under construction, may reach £800.

The ship is begun with a complete drawing to quarter-inch scale; in the case of a British warship these plans are made at the Admiralty, and the builders invited to contract for the work send their draughtsmen to Whitehall to make the tracings. On the floor of the mould-loft, which is practically a vast drawing-board, these tracings are enlarged to full size, to do which means, perhaps, two months' work. Every line needed in building the vessel is here laid down, and from these lines moulds made of thin, flat boards are taken, which are transferred to the "scribe-board," and there incised so that erasure or error is not easy. From the scribe-board, or scribe-board as it really is, the shipwrights work, and with it the merely mechanical part of the business is entered upon.

The routine has already been described in

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BUILDING OF THE JAPANESE TWIN-SCREW BATTLESHIP "FUJI"

detail in the *Leisure Hour*, so that just a sketch of it will serve our purpose here. Near the furnace in which the angle-iron is heated is the bending slab, a pavement of square slabs of iron forming a level floor perforated with holes, about six inches apart in parallel lines, as if each hole were at the corner of a dog-biscuit. On this is placed a pattern of one of the frames given on the scribe-board, and a peg is put into every

hole the curve touches. The red-hot angle-bar is drawn from the furnace and thrown on to the slab, where it is pressed against these pegs and levered, and hammered where necessary, to keep it flat and get the proper curve. When cool the corresponding rib is formed against the pegs in the same way, so that the two must be alike; and every curve is proved on the scribe-board to ensure its being correct. The shell-

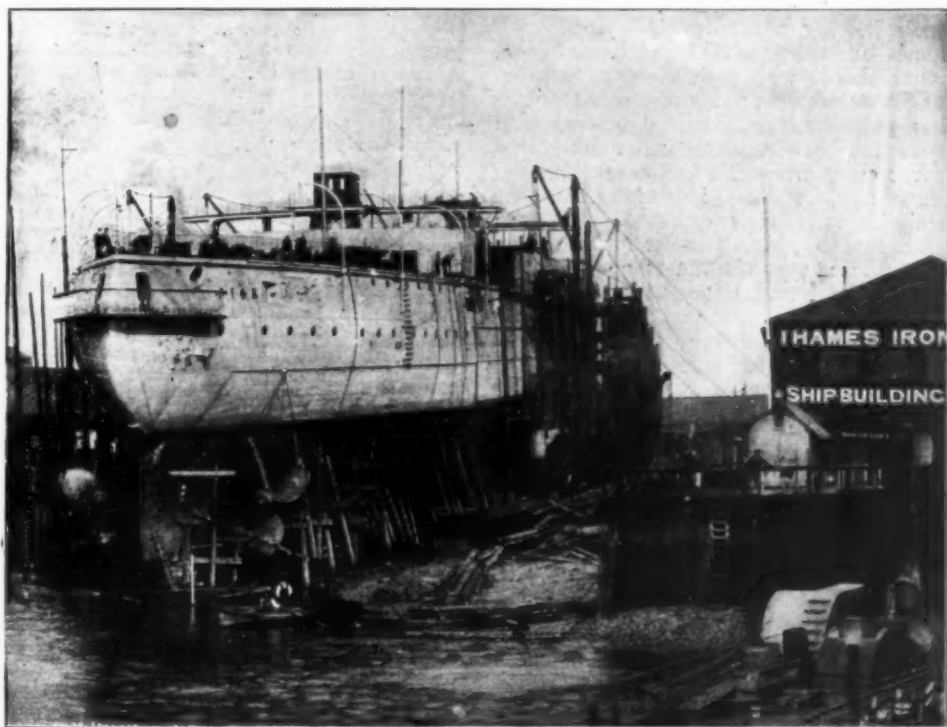
The Shipyards of the Thames

plating requires different treatment. For it the roller-mill in various modifications has to be employed, and whether the plates are to be flat or curved lengthways, widthways, or diagonally, ingenious machinery is equal to the task, however heavy it may be.

At Blackwall there are now building two battleships for the navy, the *Duncan* and *Cornwallis*, of what are known as the *Formidable* class. As we see them they are a network of steel, as if the roof of a railway station were under construction upside down: a roof of exceptional strength, of course. Amid the maze of bars, girders, and scaffolding the shape of the ship can be made out, and some of the features are distinguishable, among them the armoured deck beneath which will come the main machinery. After the framing will come the plating, and when that is advanced enough there will come the armour.

The armour is not made here, but a few words with regard to it will not be out of place, as we have been over the rest of the ground before. A mould is made for every armour-slab, just as one is made for every

frame. The steel alloy is melted in the furnaces in sufficient quantity to allow of all the unsound portions being cut away; the ingot as cast being thus much larger than the finished plate. When taken from the casting mould it is reheated and forged, not by hammers but by an hydraulic press that works up to a pressure of 8,500 tons—a power beyond the range of adjectives. From the press it goes to a rolling-mill, the rollers of which, a yard in diameter, are equal to rolling down any plate in one heat, the output from each mill being three or four plates a day. After rolling, the plate is roughly cut to size and placed for a fortnight or more in a carburising-furnace, after which it is again heated and bent into shape by hydraulic pressure, the force of which can be imagined when you think of the thickness of metal with which it has to deal. The last stage is the hardening, which is effected by again heating the plate and spraying on to both its surfaces an equal and continuous flow of cool water until it is perfectly cold. So hard does the plate become under this process that if anything goes



THE "SHIKISHIMA" BEFORE LAUNCHING

The Shipyards of the Thames

wrong it has to be melted down, for to roll it again, or cut it up for a smaller plate is simply impossible.

Finally it is erected with the adjoining plates to see that they fit on all sides, and after being compared with the mould to make sure that the pattern has been followed in every way, it is despatched to the shipyard to be built on to the vessel's structure. That is the armour-plating. With regard to the shell-plating there is one peculiarity which is worth mention, it being that wider plates are used in the Navy than in the merchant service, the requirements of commerce necessitating greater stiffness in the under-body than in a ship of war.

The Blackwall yard has a frontage to the creek of some 400 yards, and along the bank are eight building slips ranging from 200 to 400 feet in length, seven of them so placed as to ensure a straight run at the launch right out through the mouth of the creek, towards the opposite bank of the Thames half a mile away. Amid these slips—which, by the way, slope at five-eighths of an inch to a foot, the launching-ways which are built up on each side when the vessel is ready to take the water having a gradient of a sixteenth more—are the plate-mill and bar-mill and other shops, with their planing, bending, punching, shearing, drilling, counter-sinking, plate-levelling, bar-straightening, and other machines, working in buildings that cover about five and a-half acres. Among these not the least interesting are the smithies with their eighty hearths, four plate-furnaces, six angle-bar furnaces, and half a dozen steam-hammers, one of which is supplied from a large gas furnace useful in many ways and cheaper than the ordinary furnace for the work that is suitable to it, owing to its heating its iron in half the time at half the cost of fuel.

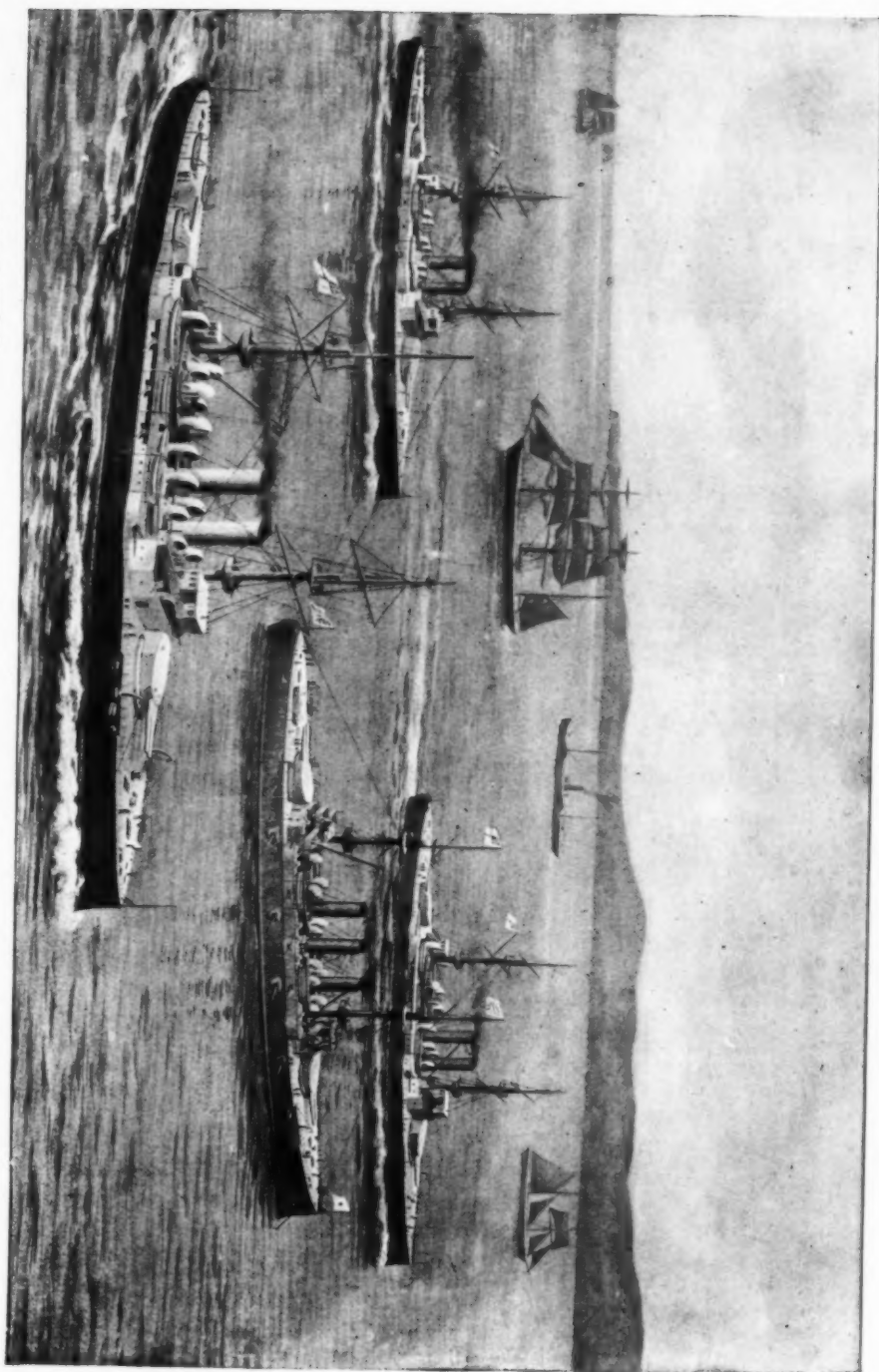
But Blackwall is more than a shipyard. The conspicuous building facing the Thames, by which it is best known to the Londoner, is now its electrical department, and was until recently its marine engineering works, which have been transferred across the river to further develop its branch there, formerly Penn's. This electrical department not only runs the light for the works, and in some cases motors for the machine tools, but undertakes contracts for dynamos and locomotives and other heavy electrical machinery and its installation either afloat or ashore. In front of this building the company has two

graving docks, one of which is 470 feet long, which are much used for repairing purposes owing to the facilities the ironworks afford. It was in this dock that the *Dunottar Castle*, after running foul of the Eddystone, had an entirely new stern fitted to her in sixteen days, and here also the P. & O. boat *Coromandel*, after her collision, had her stem and bow-plating renewed in eight days.

At the north end of the works, between Bow Creek and the railway, is the civil engineering branch, which is as well known as that devoted to shipbuilding, and as complete in every way from the drawing-office onwards. Here was built Robert Stephenson's masterpiece, the Britannia Tubular Bridge over the Menai Straits; from here came the new Hammersmith Bridge, St. Paul's Bridge at Blackfriars, and many others; hence have come roofs in a large way and small way too numerous to mention; here were built Barry Dock gates, and dock-gates are under construction now; here have been made caissons by the dozen, including those for the Blackwall Tunnel; and among the trifles and bread-and-cheese things are scores of buoys and tanks and dredgers, and particularly Hone's grabs, the success of which is chronicled in many a jubilant paragraph in the "Thames Ironworks Quarterly Gazette," for the works have their own illustrated magazine, and an admirable one it is.

According to Mr. A. F. Hills the Thames Ironworks is a business undertaking and not a philanthropic institution, but principally owing to him there has been a good deal of philanthropy connected with it for many years; and even now, when it has amalgamated with Penn's engineering works across the river, and become a public company, it does not conduct its business on quite the same lines as its competitors.

Its main feature is its "Good Fellowship System," a method of profit-sharing by which every workman is given a pecuniary interest in his work. This system was introduced some seven years ago, and has grown so steadily that over £50,000 has been distributed among the workmen, while the company has flourished more than it ever did before. The principle is very simple in essentials, but requires a good deal of book-keeping in its details. Every workman is paid a standard rate of wages, and if by increased care or exertion he alone or with



H.M.S. "ALBION"

H.M.S. "DUNCAN"

FOUR IN HAND

H.M.S. "CORNWALLIS"
L.J.B. "SHIKISHIMA"

The Shipyards of the Thames

his mates can produce the work at less than the price estimated, the difference is paid over once a month in proportion to the wages earned. Thus every man has a direct personal interest in the result of his own labours, and the only dispute likely to occur is with regard to the estimating, which converts day-work into piece-work and adds to the living wage a margin for saving.

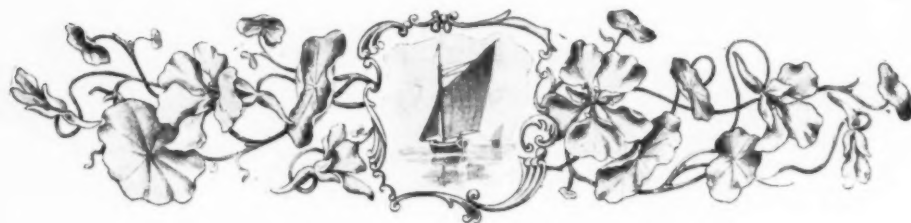
Another point claiming mention with regard to the Thames Ironworks is that it is one of the large establishments that have introduced the eight hours' day and found it pay. It is true that in five years it has more than doubled its wages bill, but much of the increase is accounted for by the larger output, and there has been such a diminution of other expenses that a larger profit has been made. That the new timetable must in some respects be more economical than the old is clear. The old plan was to begin at half-past six, and, to say nothing of the cost of lighting in the dark hours of the winter, there was the time lost by gangs being idle owing to one of their number not being punctual, and by the break for breakfast and the dinner-hour. Now the work begins at half-past seven, the hours of darkness are few, the men are more up to time, and there is no interval for breakfast—the only cessation of work taking place during dinner. That there is a gain in this is evident, but it would be difficult to agree as to what proportion of the greater profit is due to the new time system, to the fellowship system, and to good fortune.

Eight hours' work gives more time for study or play, and probably there is no establishment in which so many oppor-

tunities are given for the men to occupy themselves profitably or pleasantly during their hours of leisure. To begin with, there are Science Classes in naval architecture, ship carpentry, machine construction and drawing, applied mechanics and mathematics; and in connection with these the directors have founded four scholarships, at the West Ham Institute, in civil engineering, mechanical engineering, electrical engineering, and naval architecture. With the science classes we may perhaps group the Ambulance Corps. The musical can take their choice among a Choral Society, a Military Band, a Minstrel Troupe, an Operatic Society, and an Orchestral Band. There is a Temperance League, and there is a company of the Boys' Brigade. The Literary and Debating Society caters for another group, the Horticultural Society for another. The physical recreation societies comprise an athletic club, a cycling club, a cricket club, a football club, a gymnastic club, a quoit club, a rowing club, a swimming club, and a tennis club. In fact, the clubs are so numerous that to look after them—and the grounds in Manor Road—there is a special manager who does nothing else.

In addition to all this an insurance scheme is in operation for the clerical and technical staffs; another scheme of investment assurance exists for the men; and, as an encouragement to thrift, the debentures of the company can be paid for in instalments by those employed in the works. All this means a large programme which must have required much thought to devise, and takes a deal of trouble to keep so alive in all its items as it seems to be.

W. J. GORDON.



The Curse of Killucan

A STORY OF THE "WHITE BOYS"

BY KATHLEEN DESMOND

CHAPTER II



OTH gentlemen kept their pistols ready to hand that night, but nothing occurred. Next day, Thursday, John and Philip De Rupard had a walk in the early afternoon, and came home looking mightily well pleased with themselves. Everything went on as usual till half-past eight, when they were all sitting in the dining-room talking together. This room was a long and fairly wide room, with two large windows from within two feet of the floor to nearly eight feet high. Old pictures hung very high up in the old style, and an old oak side-board covered with family plate stood at one end. One window looked out at the side of the room towards the wood, and the other to the front. There was an old closed-in book-case between the windows, and this was where the guns were kept; they had removed all the books, and the roomy old shelves were now put to another use.

The gardener and all the outdoor people had by now got home. John rang the bell, and when Mary appeared he said, "Tell cook and Jim to come in here, I want them; and come yourself."

Mary scurried off to give her strange message, and they all came into the room looking rather sheepish and frightened; as well they might be, when their master said, "Now, my friends, I just want to tell you that I am expecting the house to be attacked to-night by the White Boys at almost *any* moment"—("By the powers, and how did he find that out!" was the thought across the mind of every one of them, expressed in their own way)—"and if you don't obey orders, I shall—well, reluctantly—be obliged to shoot inside as well as out."

This threat did not alarm them very much. Giving them no time to reply, he

said, "James, come with me to fasten up all the doors and windows; cook, stay here with your mistress; Mary, go upstairs and bring down two feather beds—the young ladies will help you—and place them up against the two windows; then take your place with cook and the mistress and we will defend you."

In another moment he and James were gone, and Philip was arranging guns and pistols, all ready loaded, on the dining-room table, as fast as he took them from the old book-case.

The moon was more or less behind the clouds that night, now shining forth, now disappearing, and making things not easy to discern. Yet there was much to see if anyone was close to the wood that night, behind Killucan House. Fifty men, with a tall, fine-looking figure at their head, drilling; the words of command given in a firm, clear, yet low tone, then "Right-about face"; and that moment the moon threw off all disguises and shone out upon as motley a set of faces as it ever looked on. Every eye turned in the one direction, and every heart throbbed with a quicker beat as "Quick March" rang out sharp and clear. On! on!—out of the mazes of the wood, past the first field and through the gate. On! on!—by the garden fence with a wonderfully steady stride, considering they were mostly more accustomed to the plough than the march.

Silence and darkness reigned all around the house; even the usual gleam of the dining-room lamp was not to be seen to-night. Over the fence everyone leaped, and nearer and nearer to the side window through the flower garden they crept. But words cannot describe the amazement of the "boys," as, suddenly, from out of the darkness, the moon having disappeared, they heard a window being quickly lowered, and a clear command "Stand off!" went forth. In sheer amaze the men stood still.

"Who goes there?" came next. The Captain, immediately recovering himself, answered, "The White Boys."

The Curse of Killucan

"What is your business?"

"The capture of the guns stored in this house."

"And supposing, now, you don't get them?"

"We will fire with those we have."

Crack, crack, crack! bang, bang! and before the "boys" had recovered their surprise, another volley was pouring over their heads.

They fired wildly, sending the bullets here, there, and everywhere; many bullets, aimed at the window, passed over the gentlemen's heads and pierced through the old pictures; others were caught in the feather beds placed against the windows, while the two old men, leaning on these, fired and fired and seemed to bear charmed lives. Guns were handed up to them inside ready loaded, and the stream of fire went on over the White Boys' heads, here and there an arm or shoulder was wounded or grazed, but none fell.

The noise, smoke, confusion, and terror were too much for them. Notwithstanding the Captain's orders, and the brave way he stood to his guns and tried to rally his men to make a determined rush, they were unequal to it; here and there a man made off to the wood in a panic, till half the men were gone. Crack! crack! bang! still went on—it was marvellous the way those two old men escaped the wild shots aimed at them, though not once did they aim at a single man, as they only wished to frighten them away. In five minutes more not one was there. The Captain had to follow, swearing he would never try to lead such cowardly fools again. Not all the cries of "Murther! Murther! Vo! Vo!" could move them, and only one out of the fifty was stout-hearted enough to creep into the bushes and remain behind. Philip took his eyes off the flying crowd to look inside for a few moments and see if anyone was hurt. Mary and cook were huddled together in a corner behind Mrs. De Rupard, calling to all the saints to save them, and Jim was decidedly pale, but keeping up a good front.

"So you are not shot?" said Philip.

"Och! the de'el a kill have they kilt me at all, sir." (Though one does not care to write of the devil in any light way, it is impossible to leave him out altogether and be true to the manner of the Irish expressions. "Why do you mention the devil so frequently?" an Englishman once asked. "Och! shure, siz, ivery toime you mention

him he has to rin seven miles, an' 'tis best to keep him on the road!")

Philip spoke for a few minutes to Mrs. De Rupard, Maria, and Clarinda congratulating the girls on the prompt way they had loaded the guns, and said the success of the repulse was largely due to them. He again looked out of the window and thought he heard a sound or movement, for there was now a great stillness. Still holding a pistol in his hand, he said, "John, I will just have a look round outside to see if any of these fellows are hanging about or coming back."

"I don't think you will find they are," said John: "we gave them a bit too warm a reception, I think."

However, Philip went out. He was only gone a moment when they heard a sharp report of a gun. John and Clarinda were outside first, and caught sight of Philip lying on the walk a few yards away. All thought of who fired was swallowed up in care for him. With the greatest difficulty they lifted him up and carried him into the house; and Maria, leaving John, Clarinda, and James, rushed back to arrange a bed for him. Jim went off on the best mare in the place to Castle-town Park for Dr. De Rupard, who came with all haste and was soon extracting the bullet.

When Philip was able to give an account of how the thing happened, this was what he said:

"I looked all round towards the wood and the avenue, and then strolled to the back of the house. Larry Shean was there stooping down beside the firewood shed next to the kitchen door with a heap of straw and small sticks, preparing to light it by means of a fuse—just a bit of old 'sugaun'¹ knotted up with old rags, probably soaked in oil. I suppose he would have made off when he lit it, and the house might have been on fire before we dreamed of it. I shouted his name, I was so horrified; he reeled round and fired low, being still in a stooping position. I staggered after him to where you found me; I fell then and could not move." The doctor prohibited any more talking, and Clarinda and Maria arranged to sit up in turns with their uncle.

When all was securely settled for the night, and the inmates of Killucan were trying to settle down and calm themselves—"Nature's soft nurse" stepping to each

¹ Sugaun.—Irish for a rope of straw.

The Curse of Killucan

bedside—their nerves got a rude shock about midnight.

A violent knocking continued, and continued as if by one in mortal terror, the

looking out could see no one about ; but as the knocking still went on, he called out, "Who is there?" A man without any hat, and with long black hair tossed about,



THE DEFENCE

kind of knocking that would make your fingers tremble if you were trying to dress quickly to open the door.

John De Rupard opened his window, and

and clothes all disordered, stood out from the door where Mr. De Rupard could see him. With clasped hands, which he wrung in an agony, he exclaimed, "For the

The Curse of Killucan

love of the great God in heaven, will you send for the docther for me, Mr. John?"

"What on earth is the matter? What is it? Is anyone ill or dying?"

"Och! shure 'tis now you said it; if the docther can't be got to come at wanst, 'tis dying he'll be."

By this time Dr. De Rupard was out in the passage to know what was the matter.

"It is *you* he wants," he replied; "you had better get ready, and I will go with you and find out who it is that is ill."

John went down and opened the door, and led the poor creature into the hall and made him sit down. The doctor went into Philip's room to see if he was disturbed, and then to tell Maria it was some one come for him. Clarinda was standing at her door in her dressing-gown, listening.

Poor Mrs. De Rupard was rather startled, though a very plucky woman, and Clarinda stayed with her. She heard the man in the hall saying to her uncle:

"Can you send for the docther at all, at all, sor? Shure we'll be too late entirely!"

"The doctor is in the house this moment with Mr. Philip, and will come with you at once."

"Oh! thin, glory be to God now for that! tho' shure I'm sorry entirely for anything wrong wid ony on ye."

"Are you Teddy Shean's brother?"

"Shure, 'tis meself that is, and Teddy is hurted entirely. For shure he must have been at *some* devil's work this blissed night. I was comin' home late across the common from t'other side of Gilligan's borryin' a plough, and shure faith! I thought I heared some'at, and wid me heart in me mouth, I says: 'What's that?' whilst I cross'd mesel, for I niver thought but 'twas 'the good people' (a name for the fairies), and didn't a moaning answer come from behind a furze-bush, and then I know'd it was *human*. But we'll be too late!—isn't the docther comin' at all at all? For 'tis dead he'll be if we don't hurry, and without iver a praste or prayer."

At this moment the doctor entered and said:

"What kind of accident is it? Arm or leg? Or is it a shot?" With the sudden thought that it might be one of the White Boys wounded in the late fray.

"No, sor, 'tis *burnt* he is!"

"Burned!" exclaimed both gentlemen at once. And they both hurried off after

the man, who started off for the common almost at a run.

A sight met their horrified eyes they never forgot. In a perfectly exhausted condition lay the most frightful-looking object, and it was long before the doctor could make out the extent of injury, or how it came about exactly. They sent his brother to his home for a cart to carry him, though they did not think he could live to be moved.

Teddy's brother Pete had told them, as they hurried along, that when he found Teddy, he was rambling about a "sugaun."

From what Philip had told them, they gathered that in his haste after firing at Philip he must have kept hold of the lighted sugaun without being aware of it, and thus his clothes caught fire, on discovering which he tore along over the common towards home, and fell into a rabbit hole, or tripped over the root of a tree; whatever it was, he fell with such violence that he was pitched on his head, cutting it severely, and breaking his leg.

In a frenzy he rolled from side to side and tore at his clothes to get them off, but rushing through the air had, of course, only made the blaze take firmer hold, and when he was thrown down not all his fighting could get his clothes off.

Poor wretch! he fainted in a short time, and when he recovered, vital parts were reached, and it was his dying moans that startled Pete.

When he recognised Pete, as he was bending over him, he clutched his clothes and could scarcely speak. Pete asked him over and over again what happened to "set him a-fire?" "Gonthoulah! a-hone! how iver did it happen? Inagh! machree! what'll I do at all at all?"

All this time Pete was struggling to quench the still smouldering clothes; and every time he begged of Teddy to let him "go get help," he only clutched his clothes and moaned "The sugaun done it! the sugaun done it." It was not till Pete feared he was really dying there and then that he broke away from him and rushed to Killucan.

Pete had the wit to remember to put his chaff bed in the bottom of the rumbling old cart. Larry fortunately was not married; his sister, who was almost an "aumathone" (that is, slightly idiotic, and idiots are treated with the most profound respect and care, and considered to be specially under Divine protection), lived with her brothers, and

The Curse of Killucan

was just able to do the few necessary things in the house for them.

Pete and John De Rupard placed the cart in the best position, and returned to the unfortunate man to consult with the doctor upon the best way to move him; though the doctor from the first was doubtful if it could be done. He stooped over the man and felt his pulse again. But even he was surprised to see how far he was gone. It could not have been more than nine o'clock when Philip saw him trying to set fire to Killucan, and now it was about one o'clock A.M.

"It is quite useless, John," said Dr. De Rupard, "he is quite past moving—even if the cart had been here sooner it could not have been done."

Tenderly they watched beside the dying man, who still faintly murmured, "The sugaun!" and no more.

Poor Pete had at once rushed off for the priest, and was even more upset about the fact of his being in danger of *dying* before the priest could come than that he was likely to lose his brother. Half-an-hour more, and breathing even had ceased; with his fingers still on the pulse the doctor looked at John and said, "It is all over," then quietly laid down the arm. "I was too late here to do anything."

Pete knocked nearly as long and quite as loud at the priest's door as at Killucan; and when he woke up "his riverence" it took some time to explain.

Then when the priest understood at last that Teddy was dying on the common, he dressed hastily and came out. Pete hurried him to the spot; but death had got there first, and Teddy Shean had breathed his last, fifteen minutes before they arrived.

Pete's horror and distress knew no bounds. To die without the priest! Unconfessed! Unanointed! The disgrace and the sorrow, and all he had gone through already, completely broke him down.

The doctor again had to come to the

rescue. The priest could give him but little consolation. Pete could pay for masses to be said, and pray for his soul; but Pete did not seem to take comfort. He poured forth all the endearing terms of deep love and sympathy as if talking to his brother under some still more terrible experience. Dr. and John De Rupard and Father Sullivan lifted the body of poor Teddy into the cart; the doctor took the horse's head and led it carefully home, Pete following with the priest and John.

When all was done that they could do, and a neighbour fetched to perform the last offices, John and the doctor walked home.

"What a night it has been, John! I am glad I stayed on. I am very anxious about Philip's leg, and greatly afraid he will be lame."

"Thank God if that is *all*," exclaimed John, and he could not speak another word.

Of course the whole country was ringing with the news next morning.

The attack of Killucan and repulse, Philip's wound, and then the terrible death of Teddy Shean.

Poor little Mollie was the first of her family to hear the frightful tidings. They had listened in terror to the firing the night before, but Patsy and Mike had come home; if with lowering brows and few words—except for a few muttered sentences from Patsy to his mother—they at least came with *whole skins*! But now, what was this? Teddy their neighbour dead! *burnent* up! out on the common without iver a *prachst*! Oh! Vo! Vo! did ye iver hear the loike sin' ye wor born?

But Pat, while his wife and children were full of sorrow and amazement, stood as one turned to stone.

"He said he'd do it, '*spite of the curse!*' '*spite of the curse!*' And already, already, he's *GAINED* it!"

THE END

[NOTE. -It may add to the interest of this sketch to know that its incidents have place in local tradition.]



Secret Commissions

BY AGNES FRY



WHAT are secret commissions?" some one may ask, and, with a dim consciousness that there has been an outcry against them of late, may add, "And what is the harm in them?"

Secret commissions of to-day are not far from being the same things as the gifts which, more than 2,000 years ago, the wise men of Israel who framed the Proverbs warned their hearers against. "The king by judgment establisheth the land, but he that exacteth gifts overthroweth it," and the danger which threatened in old days to overthrow what the king's wisdom had established, is a danger which now threatens to undermine what our better national qualities have built up. We can easily picture the wise Eastern king whose prudence and justice were continually baffled by his gift-loving vizier, willing only to help the highest bidder for his favour. But in the East, where gifts are, and ever have been, the recognised way of approaching anyone from whom either justice or favour is desired, the gift loses *one* of its most objectionable qualities—its secrecy. If all commissions in England were open and acknowledged, some would continue to be given as before, and some would lose their heinousness; but probably the greater number would neither be given nor offered.

Bribes—for we may as well give them the name which shows their real nature—can insinuate themselves into almost every transaction between man and man. In our commercial life they are a real stumbling-block and danger—an increasing evil, as some believe—and even domestic life is not free of them. It is with this latter aspect of the evil that the present paper purposes to deal.

Let me give an instance of the sort of thing that takes place. The instance is not taken from actual life, but is closely analogous to cases which I know to have happened. A mother of a young family sends her children with their nursery-governess to get boots and shoes, and shortly afterwards she asks the governess to go to the shop and pay the bill. The custom of the large and active family is worth keeping, and the shoemaker perceives that the choice

of shops rests largely with the nursery-governess, and that it is worth while to stand well with her. So when the bill is receipted and the change given, he hands the young lady an extra half-crown, and, with his suavest manner and most agreeable smile, tells her it is for herself, and that he hopes it may buy her a pair of gloves. The shoemaker may not be a reader of the Book of Proverbs, but he will be acting on its cynical statement, "Every man is a friend to him that giveth gifts." But whether he has calculated rightly or not will depend on the young lady. If she is well-informed and of good principle she will promptly reply: "No, thank you, I don't take discount! Will you kindly take it off Mrs. Quiverfull's account?" and will report the incident to her employer. She will understand that the man's intention of securing the custom of the family by buying the favour of the nursery-governess is but thinly veiled under the suggestion of a pair of gloves.

But let us suppose that the young lady is less clear-sighted or less well-informed. It is possible that, without any intention of dishonesty, the man's friendly manner may induce her to accept the money; but it is hardly possible that she will not soon perceive the real nature of the transaction. For if the money was not due in payment of the bill, it was clearly the property of her employer, and to accept it was nothing short of defrauding her. But the first step taken in accepting such "commissions"—in ignorance or thoughtlessness—must have placed many young people in a painful dilemma, and, worse still, may often have been the beginning of real dishonesty. For what we have done once, even in thoughtlessness, there is a natural instinct to defend and condone; "commit a sin twice," says the Talmud, "and it shall not seem to thee a crime." And further, to be told that "everyone does the same," and "no one thinks it wrong," will only be so many helps on the downward road to most fallible mortals; while the difficulty of resisting, the hardness of swimming against such a stream, will be a very painful struggle for those with tender consciences and clear minds.

But it is not necessary even to cross our own threshold to be met by secret commissions. "The butcher and baker and

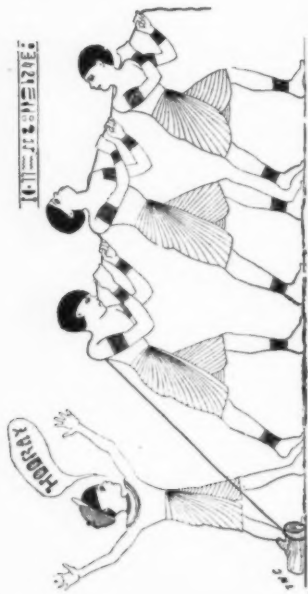
candlestick maker" are only too ready to offer them to the cook and butler respectively; while the gardener and the coachman are waylaid by the seedsman and the corndealer. "And what do I mind if the cook does get a few shillings from the baker?" a good-natured mistress may exclaim; while one master, aware that his gardener was tipped by a firm of seedsmen, advised his man to get all he could out of "those scoundrels." But this delightful good-temper and generosity are not the whole of the matter, and a conscientious master or mistress will surely care more for their servants' uprightness than for giving them the chance of earning a few ill-gotten shillings; and a loyal servant will perceive that, though at first it may seem easy and pleasant to serve two masters, it is no more possible to do so honestly in this case than in any other; the interests of the two are not identical; they are often in opposition.

But here let me observe that if the mistress really knows what is going on, and if the servant knows that her mistress knows, then all is open and above board, and a great part of the evil is removed; though it seems at best an awkward way of payment to give part of a cook's salary direct and to let part filter round by way of the tradesmen; and in a well-ordered household it will seem preferable to pay rather higher wages, and to warn servants and tradesmen alike that no tips, bribes, commissions, or "palm-oil" will be allowed. And Christmas-boxes, are they also to be tabooed? Perhaps we may make a little exception in their favour, as being part of the general neighbourliness and festivity of the season, but always with the proviso that the head of the house knows the fact, and, if desirous, the amount given; and further, that such gifts should never be a percentage on the household bills. The temptation to waste is always present to those who use what they do not pay for, and if greater waste brings greater remuneration—as is the case when a servant receives percentage on the bills—the temptation is one in which no employers should permit their dependents to be placed. But, granting all that is said of the evil of commissions in a household, how, the objector may inquire, are they to be abolished while human nature remains what it is, in a world where it is the tradesman's profit to give, and the servant's pleasure to receive? The insidious evil can only be met openly; there is no

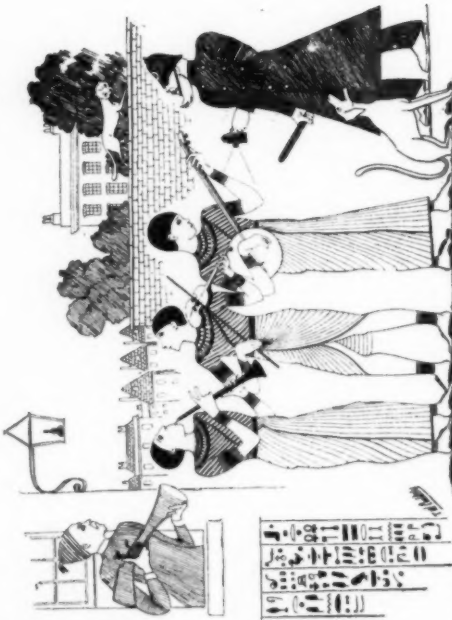
hope of checking it except by plain speaking on the part of employers, who may find to their surprise that trusted servants have been misled into taking such bribes, and are most willing, on understanding their true nature, to drop any such transaction. In many cases it may be desirable also to warn tradesmen by word of mouth, or, better still, in writing, that such offerings are not to be made; and the proper payment of those in positions of trust is the only thing which can exonerate employers from a share in the evil of bribe-giving and bribe-receiving. For the employer who puts a servant in a position requiring honesty, and omits to pay him for that quality, has himself to thank if his employé fails to show that quality which was "not in the bond"—though this cannot be said to exonerate the dishonest employé.

The task of explaining to others the nature of this evil may not be a pleasant one; a master or mistress may shrink from being thought "mean," "close-fisted," or "near"; but, as I have said before, this is an evil to which the ignorant and innocent are specially exposed, and it is a cruel and short-sighted kindness to avoid warning them. Probably the best way is to explain the matter clearly to servants on engaging them; and a plain statement of the real nature of the case and an appeal to loyalty and honour will generally convince the mind and conscience of those not already touched by the habit. Not long ago I put this question to some country girls, not old, or specially bright, or well-taught: "If you were in service, and your mistress sent you for a pound of tea, and the shopkeeper was very pleasant and wanted to give you a cup for yourself, would it be right to keep it?" and the girls with one consent agreed that the cup would belong to the mistress. So the ethics of the question are not beyond the ordinary perception.

Let not anyone put this from them as a small and unimportant question. I have touched on it only as it refers to private life, in trivial affairs, in matters of shillings and pence, not of pounds and hundreds of pounds. But the principle is clearly the same throughout, and in a time when the offering and soliciting of bribes on a large scale is carried on to such an extent, it cannot be amiss to call attention to the small beginnings, the want of clear understanding and determined principle which make the worse and larger transactions possible.



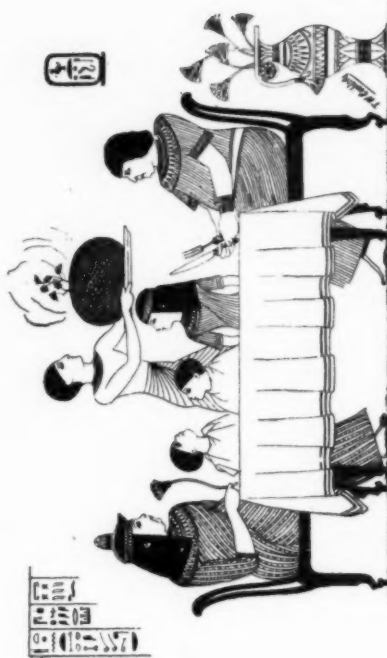
Some curious and interesting sculptures recently discovered at Chenoboscon in Upper Egypt. They prove beyond a doubt that the customs in vogue at the present day are much more ancient than we have imagined. The Hieroglyph in the right-hand corner when translated is as follows: "The Yule Log—bringing it Home." In the opposite corner is an inscription which signifies an exclamation commonly made by the people at times of rejoicing, and is supposed to have been an invocation to the god Ruen, Hea, or Ray.



In this sculpture the Hieroglyph tells us it was the custom in Ancient Egypt for certain musicians to go about the cities surrounding the inhabitants during the latter part of the "Neri," or month of Tyoi (answering to our December). Our modern "wails" are doubtless a survival of the custom.



The sculpture on the left hand is "Mixing the Pudding," and is a part of a much larger piece of sculpture showing the different operations in the kitchen of a wealthy man of the period. The Hieroglyph on the right-hand piece of sculpture informs us that it represents the custom of "Kissing under the Mistletoe"—a custom not unknown at the present day.



The Hieroglyph to the above sculpture informs us that it represents "Bringing in the Pudding."



CLOSING-TIME at the Rose and Crown!
Folks who look from their chambers down
Mark two toppers with grizzled head
Seeing each other home to bed.

Quite a familiar sight, alas!
Through open window or frosted glass.
If a clock in the town is fast or slow
It mends its manners by Jerry and Joe.

"Jerry," says Joe of the corkscrew feet,
"Crooked old fellow designed this street."
"Zackly," says Jerry, "and stupid dunce
'Spec's you to walk both sides at once."

"Jerry," says Joe, as he grasps his hat,
"Some'n maintains that the world is flat."
"Folly," says Jerry; "why, bless my soul,
'Telligent fellow can *feel* it roll."

Landladies proffer them good advice:
Parson has tackled them once or twice.
Jerry and Joe are most polite,
But tipsy as ever by nine at night.

"Any objection to sign?"—why no!
Sooner folk sign, sooner folk go.
The cards are dropped in their drawers, and so
Few keep more pledges than Jerry and Joe.

Jerry and Joe

Bachelors both (from their very birth),
Without a cousin on all the earth;
The only friends that they care to know
Are their glass, their pipe, and Jerry, or Joe.

Money?—not much, for their stipend goes
To keep the bloom on a cheerful nose;
And the lover of orchids hardly shows
So costly a bloom as the toper's rose.

Clerks in the town, as the fates condemn,
They keep the books and the books keep them,
And the youngsters fear, on a casual peeping,
The books and the facts are scarce in keeping.

If a man's look-out isn't extra bright,
More need to look *in*—to a glass at night:
They look so hard and they look so fast
That neither can see for looking at last.

Dinner-hour comes at one o'clock,
So does Joe, with a nervous knock:
Joe sinks down into Jerry's chair,
And stares at his friend with a sombre stare.

"Well," says Jerry, and gazes back,
"Anything wrong?" Says Joe, "The sack:
Got it right out!" and the friend's reply,
Is, "Poor old innocent—so have I!"

Grimly they growl, as they suck their clays,
Of the sordid world, with its heartless ways,
That reaps your toil when you're sound and strong.
And turns you adrift when your books go wrong.

At length says Joe, with a doubtful glance,
"Jerry, old fellow, there's just a chance:
Three months off it—without a drop—
I may hang up my hat at the shop—and stop."

"Queer," says Jerry, "as queer can be!
That was the governor's word to me.
I half conjecture—I really do—
Some black conspiracy 'twixt the two.

"It's a scandalous breach of the rights of man,
But might is might since the world began,
And a sensible chap, when it's misapplied,
Looks very pleasant and swears inside."



"Jerry," says Joe, "I've tried my best,
But the devil who lodges in this old vest,
He shouts for drink, and it has to be:
The workhouse is all that's left for me.

"Well, no matter, it might be worse,
There's a drink or two in a fellow's purse";
He turns and feels for his hat and stick,
And his throat is moved with a gulping click.

Jerry stands up in his rusty black
And lays his hand on his old pal's back.
"That devil's habits I quite allow—
And I hear his brother shouting now.

"For our own sakes, Joe, we're as weak and frail
As two of gin in a gallon pail,
But, chumming together so leal and long,
Why, each for the other, we *will* be strong."

There they stand for a little space
Seeing a blur for their comrade's face;
Then their hands, with a solemn grip,
Clasp in an oath of fellowship.

Two old boys, as by former rules,
Stick like snails on their shiny stools,
Fighting and winning, by slow degrees,
The silent battle that no one sees.

Two old boys through the dust or mire
Trudge by turns to each other's fire;
There they sit, and they draw a sigh
As well as a pipe that's hot and dry.

Now they waver and now they fall,
But they struggle again to their feet withal;
They look at each other and grumble low,
"For *my* sake, Jerry; for *my* sake, Joe."

"D'ye mind," says Joe at the parting door,
"Our seeing each other home before?"
"Home?" says Jerry, with solemn brow:
"Why, ar'n't we trying to do it now?"

* * *It is proposed to give a series of narrative poems or ballads, which may be useful for recitation in public.*



Miss Royce

BY ADELA E. ORPEN



MADE her acquaintance at the British Museum. She was already an old hand in the Reading Room when I went there as a novice a good while ago. The first time I spoke to her was in the room where we lady-readers leave our hats and cloaks, and where we are permitted to sit and eat our

modest lunch. She was eating her bun and orange when I came in and threw myself upon the couch. I was in a particularly bad humour, for I had been hunting for a pearl for a man who was doing a book about "Gems and Jewels," and I could not find it. I had to read one hundred and thirty volumes in five different languages before I found that miserable pearl, and I was very much irritated in my temper, being paid not by time but by the job. Well, I was at vol. one hundred and seventeen on that day, and at headache fifty-three, when I went in to lunch and saw her daintily pecking at an orange. I do not like oranges, as a rule, and at that particular moment I fairly loathed them. I scowled at Miss Royce and her orange, and she smiled brightly at me in return. I knew at once that she was a little wrong in her head. That smile had revealed the pitiful secret to my eyes. Had she been entirely sane and in full possession of her faculties, she would assuredly have scowled at me in return for the frown with which I had favoured her. But she had smiled. I began to think how sad it was, and then to reflect what a cruel comment upon the wisdom of sane people in general. A little child smiles fearlessly into all faces, and we say what a sweet confiding creature it is; but when an old lady with grey hair

smiles at me, a stranger, I straightway know she's mad. To those who have reached years of discretion every man is an enemy until he is proved to be a friend. Such is the philosophy of life! I became interested in the object of my speculations, and breaking through my rule of reticence I crossed over to her corner and began a conversation by remarking what a nasty cold day it was.

"Perhaps that is why the Museum felt so exceptionally delightful this morning," she replied.

If I needed confirmation of my suspicions I had it here. To think of praising the Reading Room! Why, we always find fault with everything—the dust on the books, the draughts on the floor, and the habits of all the people who surround us.

"You do not come often, perhaps," I suggested. All newcomers like to imply that other people are not regular habitués.

"Oh! I am one of the oldest institutions of the Reading Room," she replied brightly. "I have been here ever so long. Haven't I, Mrs. Jenkins?"

Mrs. Jenkins is the attendant.

"Well, Miss, you were 'ere before me, an' Mrs. Jones as minded the 'ats an' humberellers 'fore me said as 'ow you was afore 'er time too."

"Just so. I am one of the oldest institutions of the place. And I have seen many generations of readers," replied Miss Royce.

She did not look like a reader herself, she appeared too cheerful for that.

"Does the reading kill them off so fast as that?" I remarked bitterly.

"Oh no; by a generation I mean the generation of a book. Long ago it took much more reading to produce a book. Nowadays people come and grub for a few months, perhaps for a few weeks only, and then out comes a book as the result of their brief labours."

I looked sharply at Miss Royce. Was it possible I had made a complete mistake? That speech sounded almost cynical enough to establish her sanity.

After that, I used always to talk with

her at luncheon-time, and sometimes I would stray around to her seat. She invariably occupied the same place at one of the tables facing the clock, and she always had some curious pattern before her which she was copying in faded water-colours. She used to get her patterns out of old books, and she was doing them, she said, for a firm of cretonne manufacturers in the City. She never did anything else, but she seemed fully occupied and completely happy in her work. Far more so, indeed, than the rest of us, who generally wore a more or less worried and dissatisfied look—the price we had to pay for our sanity. Miss Royce had always something cheerful to whisper back to me when I went to say good-morning, either about the weather or about myself, so that I soon began to depend upon her to supply me with cheerfulness, and she never failed, no, not on the dullest of November mornings. She fell ill one winter, and stayed away for quite two weeks. I felt miserable without her, and used to look at her seat regretfully if it was vacant, and wrathfully if it was occupied by a stranger. What right had anyone to take the dear little soul's place? Then I used to take it myself, so as to engage it for her in case she returned unexpectedly. I also tried to find out where she lived, so that I might go and see her, but Mrs. Jenkins knew nothing of her whereabouts.

The days passed, and Miss Royce did not come. I began to fear that I should never see her again. At length one morning about eleven o'clock she came softly up and touched my shoulder.

"Oh! dear Miss Royce, I am so glad you've come back!" I cried aloud in my excitement, and all the readers near me turned and scowled savagely, while one of the attendants came up saying that the Chief Librarian particularly requested that complete silence might be maintained in the Reading Room.

A few days later Miss Royce asked me to come and see her.

"Will you come to tea at six o'clock on Sunday next? That will be the best time for we shall all be at home that evening."

She gave me an address close to the Museum, in one of those sad little squares where now reigns an historic past. Punctual to the minute I knocked at the door, and Miss Royce herself admitted me.

"They are all out," she said. "That is why I asked you to come at this hour. For

I have never had a visitor before, and it would only cause them to wonder."

I felt rather puzzled, for I distinctly remembered her having said that this would be a convenient time because "they would be in." However, I followed her in silence to the top of what was evidently a lodging-house. We went up to the garret and entered a low door which she unlocked. The room was small, but extremely neat; a diminutive white bed extended along the wall opposite the door, but the most noticeable feature of the room was a screen which divided it in half. I wondered a little why my hostess had elected to have the bedroom half on this side of the screen rather than on the other. But since she had no visitors it did not much matter. She seemed a little flustered, and a pretty pink colour came into her poor old faded cheeks.

"The fact is, my dear," she said, "I am not used to having visitors. We all live quite by ourselves here. You see, we don't feel the need of outsiders, we are so many already. Perhaps our own happy little life makes us heedless and selfish."

I was bewildered.

"Have you, then, some sisters?" I asked.

"No, my dear, my sisters are dead long years ago. I mean the children."

"The children!" I repeated in amazement.

"Yes, I have quite a family."

Instinctively I looked on the hearth-rug for cats. There was not one to be seen. Perhaps she meant birds, but there was no sound of birds anywhere in the small room. She moved one of the folds of the screen, and motioned me to follow her.

"Here we all are, you see. Quite a big family circle, isn't it?"

A tea-table was set out for six persons; around it stood five ordinary small chairs and one high chair such as a baby might use. I gazed in mute astonishment. The chairs were empty—at least, I thought so at first sight, but a second glance showed me a picture in each chair, with the exception of those at the top and bottom of the table.

"This is my daughter Ada, my eldest," said Miss Royce, pointing to a faded picture of a young girl in low-neck dress and long curls, such as they used to wear in my mother's young days. "And here is Bob. He is going to be a sailor, like his father. Just now he is at school; and this is Susie, and here is Babs, mother's pet of pets."

Miss Royce

She held up the picture of a curly-headed baby boy with bright blue eyes.

"You are quite surprised, aren't you now?—confess," said Miss Royce, with such a proud, pleased laugh—just such a laugh as I have often heard from the lips of young mothers when exhibiting their foolish-looking bald-headed babies, of whom they are so ridiculously proud.

"Yes, I am surprised," I gasped, devoutly hoping that my voice did not sound as queer to her ears as it did to mine. I

cheerily in the intervals of feeding her strange children. She ate nothing herself, but when by some means she had assured herself that the children had eaten enough, she began to go around the table and eat all that was on their plates. Thus she made an excellent tea. She drank "Bob's" tumbler of water between "Ada's" cocoa and "Susie's" weak tea, and she finished up with "Babs'" bread-and-milk. I asked to see the silver bowl when she had finished. It bore this device: "To N. R.



"YES, I HAVE QUITE A FAMILY"

did not really know what to say. But she seemed not aware of any deficiency on my part.

"Sit there between Bob and Ada," she said; "and now will you have tea or cocoa? I have both ready. Ada always takes cocoa."

I said I would take cocoa, in order to see what would happen. She filled my cup, and then filled a smaller one and put it in front of the chair occupied by the faded picture. "Bob" had a tumbler with plain cold water, "Susie" had weak tea, and "Babs" had bread-and-milk in a tiny silver bowl. Miss Royce chatted away

from R. N." and the date "May 29th, 1845."

I looked inquiringly at Miss Royce, never imagining that amid so many inexplicable things she could explain that. But she saw and understood the look at once.

"Ah, yes, you admire that. Given to me by my husband just before he sailed. He was in the Royal Navy, you see, and my name being Nellie Royce it was his little joke. This is his picture."

She showed me an ancient daguerreotype of a young man in naval uniform, his hair and whiskers trimmed in the style of fifty years ago.

"Where is he now?" I asked with a feeling of guilty shame. It seemed as if I were making fun of the poor old creature.

"He is with the expedition under Captain Sir John Franklin. I expect him back shortly—they have been absent a long time now. He is on board the *Erebus*."

She chatted on some time, always about the doings and sayings of the "children." I helped her wash up the tea-things and put the china away in her neat little press. The picture children she also put away, and placing the lamp on the table sat down beside me and talked of my work in the Museum. She seemed as sane as myself—indeed I began at times to wonder if it had not been I who was mad at tea and had fancied all those pictures. I did not stay long, but hurried away, fearing lest my presence in her room amid her strange fancies might somehow break the thread which bound them to her brain. She excused herself from coming with me to the corner where the 'bus would pass by, saying she always read to the "children" in the evening.

"I am reading Franklin's 'Voyage down the Great Fish River,'" she said. "It is most interesting, and I particularly wish the children to be familiar with Captain Franklin's early voyages, because of their father being on the *Erebus* now. The expedition seems quite to belong to us."

I murmured something about the great interest all must feel in the fate of so gallant a sailor as Sir John Franklin, and she said "Quite so," with cheery acquiescence.

I never went to tea with Miss Royce again. I rather dreaded that she might ask me, but she never did, nor did she ever refer in the most distant manner to any of her dream-children. As the cold weather came on, she seemed to shrivel up and fade away. She took a chill, and came no more to the Museum. I often went to her lodging, but she would not see me; only sent her dear love, and hoped I would look after myself and not get cold. And remembering the fancies that inhabited her little attic-home I did not intrude. I spent Christmas in the country with friends, and when I returned to my work at the Reading Room I was told Miss Royce was dead. The attendant gave me a small parcel which she had received from Miss Royce's landlady. I opened it with trembling fingers and found inside the little silver bowl from "R. N."—the strange little bowl out of which "Babs" had eaten his bread-and-milk. I have that little bowl still, and on Sunday evenings I have my supper of bread-and-milk out of it. Then I think about Miss Royce, and wonder what it was that cast that veil over her intellect but not over her loving, gentle heart. I think, too, and wonder whether she felt any disappointment when the hand of death lifted that veil, and she saw that her children were but dreams which faded in the clear light of the Eternal Day. But no. There was no room for regret and disappointment, for surely "R. N." was there before her, waiting, at last home from the expedition under Captain Sir John Franklin.



A Leisure Hour with my Great-great Grandmother's Cookery Book



T lies upon the table before me, thumbed and torn, dingy and broken-backed now, though once evidently handsomely bound. The title-page is gone, and that is a pity, for though from advertisements at the end we may gather that it was "Printed for John and Henry Pemberton, at the Golden Buck against

St. Dunstan's Church in Fleet Street, 1741," yet the title-page was probably excellent reading. The short title of the book is "The Compleat Housewife or Accomplish'd Gentlewoman's Companion," and in a preface some ten pages long the amiable authoress first gives the world her reason for writing a preface, and then a brief history of cooking, with her reasons for writing the book.

"It being," she says, "grown as unfashionable for a book now to appear in Publick without a

My Great-great Grandmother's Cookery Book

Preface as for a Lady to appear at a Ball without a Hoop Petticoat, I shall conform to Custom for Fashion sake and not through any necessity. The Subject being both common and universal needs no Arguments to introduce it, and being so necessary for the Gratification of the Appetite stands in need of no Encomiums to attract persons to the Practice of it since there are but few nowadays who love not good Eating and Drinking."

She therefore quickly reverts to the history of cookery and turns back for her facts as far as the book of Genesis and the life of Abraham, reminding us that salt is the first seasoning named and that Abraham gave orders to "dress a fatted calf," but by an odd mistake between two brothers, the lady (whose knowledge of Scripture cannot, we fear, be considered as thorough as she would wish us to think) proceeds to assert that "if Esau was not the first cook, Esau is the first person mentioned that made any advance beyond plain dressing, as Boiling, Roasting, etc.," referring, of course, to those two events of his life and his brother's in which savouries prepared by Jacob played such an important part.

"Cookery," she continues, "soon grew to an Art, nay a Trade for when the Israelites grew Fashionists" (fashionist is a good word) "and would have a King that they might be like the rest of their neighbours, we read of Cooks, Confectioners, etc.," but unhappily even in the antiquity which is her pride the lady sees cause to fear seriously that this High Art "is arrived now at its greatest Height and Perfection, if it not got beyond it, even to its Declension, for whatever new upstart, out of the way Messes some Humourists have invented, such as stuffing a roasted Leg of Mutton with pickled Herring, and the like are only the Sallies of a capricious Appetite and debauching rather than improving the Art itself." No such odd and fantastical messes will she admit to her book, though she has "so far temporised, as since we have, to our Disgrace, so fondly admired the French Tongue, French Modes, and also French Messes, to present you now and then with such Receipts of the French Cookery as she thinks may not be disagreeable to English Palates."

Then follows a little proper decorous self-praise, such as every self-respecting preface-writer uses. Her receipts are:

"all suitable, wholesome, toothsome, practicable, easy to be performed, proper for a frugal as also for a sumptuous table and if rightly observed will prevent the spoiling of many a good Dish, the Waste of Many good Materials, the Vexation that attends such Mismanagements and the Curses not unfrequently bestowed upon Cooks."

But cookery receipts are not all that our accomplished friend has to offer us. Besides "Cordial Waters and Powders above seventy," there are "Receipts for Medicines, Salves, Ointments, good in several Diseases, Wounds, Hurts, Bruises, Aches, Pains, etc. These medicines are

"very proper for those generous, charitable and Christian Gentlemen, that have a Disposition to be serviceable to their poor country Neighbours labouring under any of the afflicted Circumstances

mentioned; who, by making the medicines and generously Contributing as Occasions offer, may help the Poor in their Afflictions, gain their Good Will and Wishes, entitle themselves to their Blessings and Prayers, and also have the Pleasure of seeing the Good they do in this world and have good Reason to hope for a Reward (though not by way of Merit) in the World to come."

After this follows "A Bill of Fare for every Season of the Year," two first and second courses for every month—very suggestive and interesting reading, and remarkable both for quantity and variety. Indeed, the first thing that occurs to an observant reader is that the appetites of our ancestors must have been singularly good; and that if these bills of fare are intended, as we are told, for frugal tables, it is difficult to imagine what could have been added for those who expect to fare sumptuously every day. Here are one or two specimens taken by chance.

JANUARY

First Course

Collar of Brawn Bisque of Fish
Sooop with Vermicelli
Orange Pudding with Patties
Chine and Turkey Lamb Pasty
Roasted Pullets with Eggs
Oyster Pye
Roasted Lamb in Joints
Grand Sallad with Pickles

Second Course

Wild Fowl of all Sorts
Chine of Salmon boiled with Smelts
Fruit of all Sorts
Jole of Sturgeon Marinated Fish
Collared Pig
Dried Tongues, with salt Sallads

FEBRUARY

First Course

Sooop Lorain
Turbot (boiled) with Oysters and Shrimps
Grand Patty Hen Turkeys with Eggs
Marrow Puddings Stewed Carps and broiled Eels
Spring Pye Chine of Mutton with Pickles
Dish of Scotch Collops Dish of Salmigondin

Second Course

Fat Chickens and Tame Pigeons
Asparagus and Lupins Tansy and Fritters
Dish of fruit of Sorts Dish of fried Soles
Dish of Tarts, Custards and Cheesecakes

One cannot but wonder for what number these courses were intended—possibly they were for the meal of an entire household, as we are told the lady had been employed in many noble households; but one wonders also whether our ancestors really enjoyed

My Great-great Grandmother's Cookery Book

such "fine confused feeding," such mixtures without any set order of meats and sweets, of fish and fruits. When did the order which is heaven's first law dawn on the minds of those—cooks or others—who regulate our meals? When was it first perceived that in the natural fitness of things soups should go before fish, and savouries be mainly ended before sweets appear to tickle the palate? There is something very barbarous in the arrangements proposed by our authoress. Thus for her bill of fare in May, the first three dishes she sets before us are "Jole of Salmon, etc.," whatever that may be.

"Crawfish Soup and Dish of Sweet Puddings of Colours with Chicken Pye, Roasted Tongues and Udders, Roasted Fowls à la dante," and many other good meats. Then after a while the Second Course on the same day begins with "Young Turkeys larded, and Quails," continues with "Roasted Lobsters, Green guse, Orangeade Pye, Lemon and Chocolate Creams," ending with a "Dish of collared Eels with Crayfish."

What is the difference, one would like to know, between crawfish and crayfish, as we are thus introduced to both at one meal? Or is it only one of those little uncertainties of spelling which we find every now and then?

It may possibly be, however, that we are only intended to take our choice and make a selection from these different lists of dishes, but even then the order or want of order is remarkable; fruits and meats could hardly be more mixed at the table of the most housewifely German frau.

But, indeed, in reading through these bills of fare there are many things that excite surprise. Surely the climate of England must have been slightly different in 1741 from what it is in the present year of grace, when we find asparagus and lupins in February and green peas recommended as a second-course dish in April! Green geesetoo, and "Ducklings with Turkey Poults and Buttered Apple-Pye" belong to the same month, while our degenerate days think it early enough if we get them in June.

A Pupton with Maintenon cutlets is, one supposes, one of those unworthy yieldings to the depraved public taste for French fashions to which the preface so sadly refers; but how the mysterious dish was compounded it is now impossible to say, for our authoress, repenting perhaps of her compliance, omits it altogether from her index. That game laws did not exist in 1741 is very clear, for, horrible to relate, roast pheasants are a dish for May; young

pheasants (very young, indeed, one would fancy) for June; partridges and quails for July; and pheasants and partridges together for August.

Mushrooms were evidently also to be had at all seasons from April to December, while potatoes are only once mentioned as Potato Pye in June. This is singular when we reflect that we in 1886 celebrated the tercentenary of the introduction of the potato, and might, we are told, have done so at least twenty years earlier.

But we must not linger too long over the bills of fare, interesting though they are, but must turn to the body of the book, just noting in passing a mention of "Green Puery Soup." Can this be a purée masquerading in English dress of the period?

Here is the crawfish or lobster soup as ordered for first course in May, a tolerably elaborate mixture:

"Take whittings, flounders and grigs, and put them in a gallon of water, with pepper, salt, cloves, mace, a bunch of sweet herbs, a little onion and boil them to pieces and strain them out of the liquor; then take a large carp, and cut off the fish on one side of it and put some eel to it and make forc'd meat of it and lay it on the carp as before; dredge grated bread over it and butter a dish well, and put it in an oven and bake it; then take an hundred of crawfish break all the shells of the claws and tails, and take out the meat as whole as you can; then break all the shells small and the spawn of a lobster and put them to the soup and if you please some gravy and give them a boil together and strain the liquor out into another saucepan, with the tops of French rolls dried and beat and sifted and give it a boil up to thicken, then brown some butter and put in your tails and claws of your crawfish and some of your forc'd meat made into balls, and put your baked carp into the middle of the dish, and pour your soup on boiling hot and your crawfish in it; garnish the dish with lemon and scalded greens."

We have but to turn the page to find what is no doubt that very Plumb Porridge, celebrated in nursery rhyme, which even cold was apparently strong enough to burn the mouth:

"TO MAKE PLUMB PORRIDGE"

"Take a leg and shin of beef to ten gallons of water boil it very tender, and when the broth is strong strain it out, wipe the pot and put in the broth again; slice six penny loaves thin, put some of the liquor to it, cover it up and let it stand a quarter of an hour, then put it in your pot, let it boil a quarter of an hour, then put in five pounds of currants five pounds of raisins and two pounds of prunes and let them boil till they swell, then put in three quarters of an ounce of mace, half an ounce of cloves, two nutmegs, all of them beat fine, and mix it with a little liquor cold, and put them in a

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very little while and take off the pot, and put in three pounds of sugar, a little salt, a quart of sack and a quart of claret, the juice of two or three lemons; you may thicken with sago instead of bread if you please; pour them into earthen pans and keep them for use."

Porridge, we notice, was plural then as in Scotland to this day. This is also the first mention of sago, and various ways of using it are given throughout the book, but rice does not seem to have been so much appreciated by our authoress, or perhaps it was too common for her. It is only mentioned once or twice.

Here is another classic dish for whoever may like to try it:

"AN HUMBLE PYE

"Take a pound and a half of fillet of veal and mince it with the same quantity of beef suet, season it with sweet spice, five pippins, an handful of spinage and a hard lettuce, thyme and parsley; mix it with a penny grated white loaf, the yolks of eggs, sack and orange flower water, a pound and a half of currants and preserves—as the lamb pye add a candle."

There is a fine vagueness about quantities here. A *candle*, we have discovered, was a Sweet Sauce for a Pye, to be added after it was baked; and a *lear* a savoury sauce, used in the same way.

But though many of the dishes seem unsuitable to our modern taste there are many more which are undoubtedly good. All the forms of Collared—that is, spiced and rolled—meat, only too seldom seen now, are excellent, whether it be collared eels, collared beef, collared calf's head, collared salmon, or collared venison. Neither time nor pains in preparation was spared in those leisurely painstaking days, and the number of ingredients given is truly surprising, while the lavish profusion with which twenty or thirty eggs, quarts of cream and pounds of butter are ordered, speaks volumes for the cheapness of articles so invaluable and dear to a cook. For one rice pudding made with two handfuls of rice, half a pound of butter and ten or twelve eggs are ordered; and for another with three spoonfuls of rice flour, a pint of cream and a pound of fresh butter are needed; while in one recipe for oyster loaves two pounds of butter are used in dressing one quart of oysters.

Here is a rather simpler recipe for dressing oysters that no epicure, even in our own luxurious days, need despise.

"Take a quart of Oysters, wash them in their own liquor, strain it and put them in it with a

little salt, some pepper and sliced nut-meg, let the Oysters stew a little, with all these things and thicken them with a great deal of butter; then take six French rolls, cut a piece off the top and take out the crumb, take your oysters boiling hot and fill the rolls full, and set 'em near the fire on a chafeing dish of coals, and let them be hot through, and as the liquor soaks in fill them up with more if you have them or some hot gravy; so serve them up instead of a pudding."

But when we turn to creams and jellies, we find the authoress in her glory. Old-fashioned she may be still, but it is a good old fashion. Her lemon cream, orange cream, gooseberry cream, quince cream, almond cream, pistachia cream, and many others with jellies and syllabubs in equal or greater variety, could not be surpassed by the most modern cookery book. Her cakes are both elaborate and toothsome, and for preserved and dried and candied fruits of all kinds, no modern housewife can come near her. From the everyday *Gooseberry Gam* to the feast-day candied *Apricocks*, from ordinary stewed apples to the mysteries of sugar of roses, candied primroses, violets, or cowslips, nothing is too simple or too difficult for her, nothing too ambitious for her to attempt. She has, by the way, a capital word, onomatopœic in the extreme, and we suspect of her own invention, to describe boiling point in jams or syrups, "*Bring you Plumbs to the boil*," she says, "see them give two or three *walms*, then scum them," etc.

The prescription for puff paste is little different from that used by confectioners now; for the stiffer paste for venison pasty she allows 6 lb. of butter and ten eggs to 14 lb. of flour. One more Pye we must give our readers, a *Baltalia Pye* or *Bride Pye*, for we feel it would be cruel to deprive them of a Barmecide feast upon such a wonder.

"Take young chickens as big as blackbirds, quails, young partridges, and larks and squab pigeons truss them and put them in your pye, then have ox palates boiled, blanched, and cut in pieces, lamb-stones, sweetbreads, cut in halves, cock's combs blanched, a quart of oysters dipt in eggs and dredged over with grated bread, and marrow; having so done, sheeps-tongues boil'd peel'd and cut in slices; season all with salt, pepper, cloves, mace and nutmegs beaten and mix'd together; put butter at the bottom of the pye, and place the rest in with the yolks of hard eggs, knots of eggs, cocks-stones and treads, fore'd meat balls, cover all with butter and cover up the Pye put in five or six spoonfuls of water when it goes into the oven and when it is drawn pour it out and put in gravy.

Four-and-twenty blackbirds was surely nothing to this.

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But we must turn now to those cordials and waters, medicines and salves, that are really the chief pride of the lady, and of which she boasts that they have cured when all other means failed. Here again no trouble or pains are spared, and if some of the ingredients are peculiar and some quite unmentionable to ears polite, the authoress has perfect faith in them all. One may perhaps see some reason why for a rheumatism the party is directed to "take of the finest glazed gunpowder one large thimbleful wet with milk from the cow," but it is more difficult to believe in the efficacy of "small packthread wound five times round the neck, wrists, and ancles, and wet with oil of amber twice a day for nine days together," in curing an ague. For a trembling at the heart "a syrup of damask roses and added thereto a small quantity of red coral, pearl, and amber grease all finely beaten and powdered," is rather a costly remedy, while to "draw up a relaxed uvula," dried "ground ivy heated between two tiles, and laid as hot as can be borne upon the top of the head," suggests curious ideas.

One thing is quite clear, the mad dog panic of 1886 was nothing to that of 1741. Our friend gives us no less than nine prescriptions—all infallible—for the cure of the bite of a mad dog in man or beast, besides referring to the "known specific of dipping in the sea or salt water"; and we also have bestowed upon us "A true Account of a Person who died by the Bite of a Mad Dog—one *William Janes*, a farmer in good repute in *Milton* near *Woburn* in *Bedfordshire*, who was bit by a mad dog on *Easter day*." Unhappily for the theory, this unfortunate sufferer not only "dipt in the salt water," but also partook of the infallible specific of one Dr. Mead which consisted of "dried and powdered *Lichen cinereus terrestris*, or in English, *Ash-coloured ground liverwort*," mixed with black pepper. Apparently many things were considered certain cures for this malady—so many that one wonders a little at the terror evidently felt about it. The simplest recipe is "primrose roots steeped in white wine and strained."

It is a sad pity that want of space forbids our giving "A full Discovery of the Medicines given by me, *Joanna Stephens* for the cure of the Stone and Gravel; and a particular Account of my Method of preparing and giving the same," for we are assured in a note that "Mrs. Stephens

received five thousand pounds reward on her medicine having been tried and approved March 17th, 1739-40. See '*London Gazette*,' March 23, 1739-40." Did ever physician receive such a fee for a prescription before or since? It might make even the purse mouths of our wealthiest M.D.'s to water. There cannot be above ten of them who make more than that as a year's income. The principal ingredients in these medicines are calcined eggshells, calcined snails and shells with swine's cresses, green camomile fennel, parsley, burdock leaves, and Alicante soap, together with wild carrot seeds, burdock seeds, ashen-keys and hips and haws all burnt to a blackness, and not exactly costly drugs any of them.

Some of these prescriptions are specially approved and confirmed by the authoress, whose initials we thus discover to have been S. C. Thus for a pleurisy, "Let the patient bleed plentifully, then drink off a pint of spring water with 30 drops in it of spirit of sal ammoniac. Approved by myself S.C."

For a quinsy or swelling in the throat, when the patient cannot swallow:

"Take a toast of household bread, as big as will cover the top of the head, well bak'd on both sides, soak it in right French brandy; let the top of the head be shav'd, then bind it on with a cloth; if this be done at night going to bed, it will cure before morning as I myself have had experience of—*prob. S. C.*"

For dimness of sight and sore eyes:

"Take Eyebright, sweet marjoram and betony dry'd, of each a like quantity, the same quantity of tobacco as of all the rest, take it in a pipe as you do tobacco for some time; and take of the right *Portugal* snuff, put it into the corner of your eyes morning and night, and take it likewise as snuff. This cured Judge *Ayres*, Sir *Edward Seymour*, and Sir *John Houbion*, that they could read without spectacles after they had used them many years, *S. C.*"

To cure blindness, when the cause proceeds within the eye:

"Take a double handful of the top leaves of *Sallary* and a spoonful of salt, and pound them together, and when it is pounded make into a poultice and put it on the party's contrary hand-wrist (that is, if the right eye be bad put it to the left wrist) and repeat it for about three or four times, but put it fresh once in twenty-four hours.

One cannot but think that the faith needed even to try such a remedy as this last, merited to be rewarded by a cure.

The all-accomplished gentlewoman by no

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means despises the cares and graces of the toilet; she tells us how to take off freckles, how to make almond paste to whiten the hands, how to procure a good colour, how to prepare an ointment to cause hair to grow, how to make lip salve, how to take away pimples, besides giving various "Waters to wash the face," and incidentally mentioning that it is well to "wear a piece of lead beaten exceedingly thin, for a forehead piece, under a forehead cloth; it keeps the forehead smooth and plump," but we find no recipe for rouge of any kind nor for face powders. It was probably from one of these very recipes for the toilet that Olivia and Sophia Primrose prepared the wash for the face which that treacherous father of theirs, "seemingly by accident" (as he tells us without any compunction for his deceitful conduct), overturned into the fire "when it was too late to begin another."

Of stills and alembics it is difficult to say how many must have been required in an ordinary household in those days; indeed, the still-room and the still-room maid were evidently of equal if not of superior importance to the kitchen and the cook, while the management of the herb garden (or physic garden as it is sometimes styled) must have needed a special education and a learning which is now quite extinct among us. It is almost impossible to imagine in some cases that all the ingredients could be ever brought together. We will give but one example of a Cordial Water, and so conclude, hoping sincerely that some of our readers may be tempted to try this wonderful recipe, and that they may live long enough to collect all that is required for it.

"THE LADY HEWETS WATER

"Take red sage, betony, spearmint, unset hyssop, setwell thyme, balm, penny royal, celandine, water cresses, heartease, lavender, angelica, germaner, calamint, tamarisk, coltsfoot, avius, valerian, saxifrage, pimpernel, vervain, parsley, rosemary, savory, scabius, agrimony, mother-thyme, wild

marjoram, roman wormwood, carduus benethetus, pellitory of the wall, field daisies flowers and leaves; of each of these herbs take a handful after they are pick'd and wash'd; of rue, yarrow, comfrey, plantane, camomil, maiden-hair, sweet marjoram, dragons, of each of these a handful before they are wash'd or pick'd; red rose leaves and cowslip flowers, of each half a peck, rosemary flowers a quarter of a peck, hartshorn two ounces, juniper berries one dram, china roots one ounce, comfrey roots sliced, aniseeds, fennel seeds, carraway seeds, nutmegs, ginger, cinnamon, pepper, spikenard, parsley seeds, cloves and mace, aromaticum rosarum, three drams, sassafras slic'd half an ounce, elecampane roots, melilot-flowers, calamus aromaticus, cardamums, lignum aloes, rhubarb sliced thin, galingal, veronica, lodericum, cubebs grains, of each of these two drams, the cordials bezoar thirty grains, musk twenty-four grains, ambergrease twenty grains, flour of coral two drams, flour of amber one dram, flour of pearl two drams, gold four leaves, saffron in a little bag two drams, white sugar candy one pound; wash the herbs and swing them in a cloth till they are dry, then cut them and put them into an earthen pot, and in the midst of the herbs put the spices, seeds, and drugs being bruised, then put thereto such a quantity of sherry sack as will cover them, so let them stop twenty-four hours; then distil it in an alembick, and make two distillings from it from each of which draw three pints of water; mix it all together and put it into quart bottles and divide the cordials into three parts, and put into each bottle of water a like quantity; shake it often together at the first; the longer you keep it the better it will be, there never was a better cordial in cases of the greatest illness, two or three spoonfuls could almost revive from death!"

So, indeed, we are almost inclined to believe—and thus we take our leave of the Accomplish'd Gentlewoman, feeling that we have not half exhausted the wonders of her knowledge, omitting with special regret a long and learned dissertation "On the Art of Carving with the Terms proper for the same," which we wish might be made a subject of compulsory examination for young gentlemen, waiters, and others in the present day—but deeply impressed with the variety of her wisdom, the peculiarity of some of her theories, and the degeneracy of her descendants in our own day.

AGNES C. MAITLAND



Natural History Rambles in Winter

OF MAMMALS

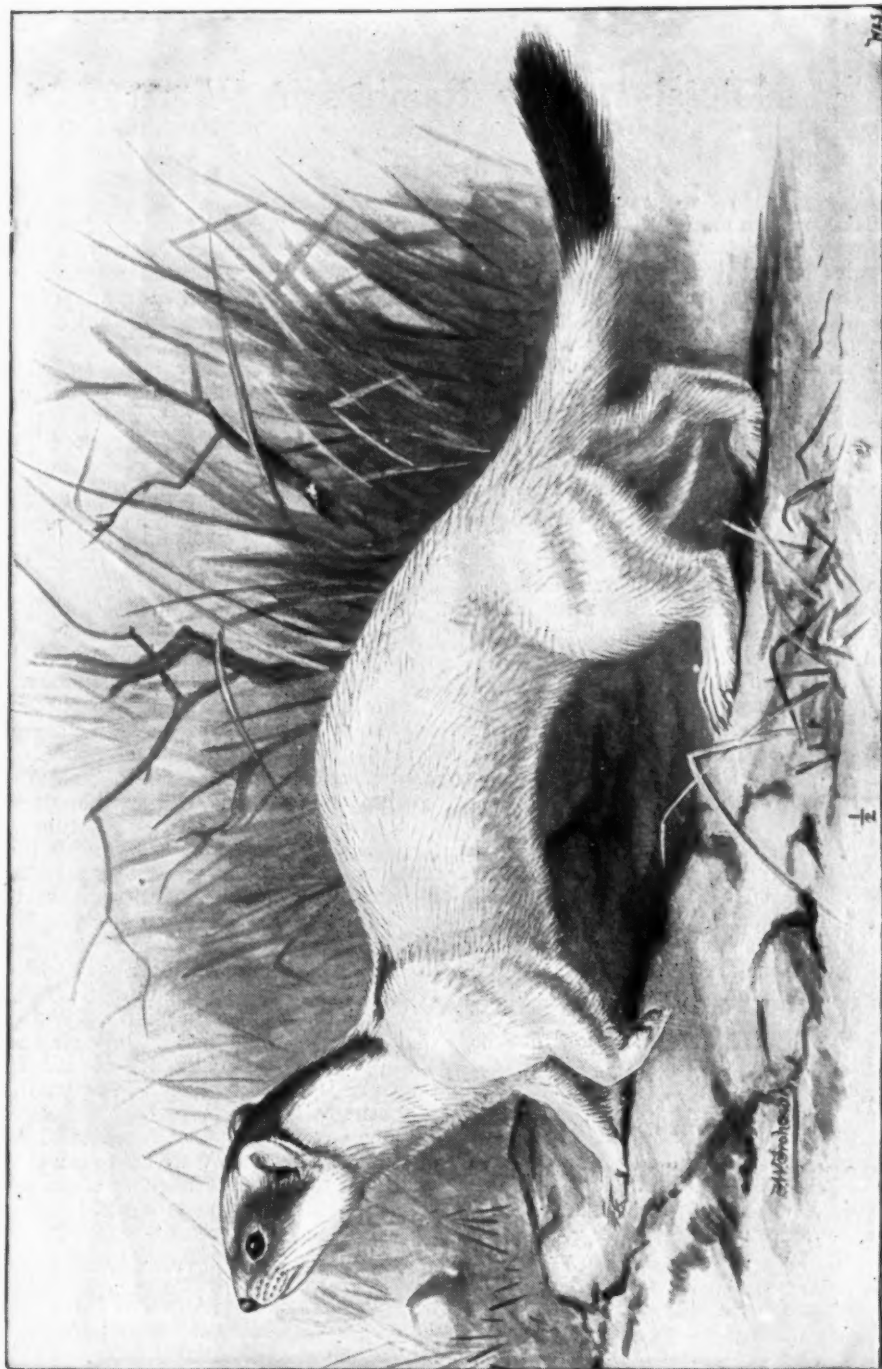
IT is a common notion that the winter is a very bad season for the amateur naturalist, using that term in the wide sense. Like many other common notions it is quite erroneous. The brightness and glory of summer have indeed been replaced by chill and gloom; but though Nature seems dead, she is not really so; the winter sleep is but a preparation for the awakening of spring. And as soon as one begins to look into the matter it becomes evident that the sleep is very far from being universal—that there is a pretty good show of animal life patent to all, and very much more to be found for the seeking. Some people say that the country in winter is dull and drear, and the weather repellent. But though everyone may not share Kingsley's enthusiasm for the "black north-easter" of the Ode in which he poured out his sportsman's spirit, that keen wind does not blow every day; and there is nothing more bracing to town-dwellers than a country ramble, even in winter, if due regard be paid to suitable protection against cold and the more insidious damp. There is no reason why winter should not be to the amateur naturalist what it is to the foxhunter and the shore-shooter. And over these he has the advantage that for him there is no close time to bar his sport. He may carry it on as long as he pleases.

To make a country ramble interesting, from the point of view of the amateur naturalist, the habit of observation must be acquired and cultivated by practice; for though we have Dogberry's authority for believing that "to write and read comes by nature," it is pretty certain that to observe does not. And to see things one must have at least a general idea of what to look for, the sort of place in which, and the time when, the object sought is likely to be found. This calls for some acquaintance with the literature of the subject, which at first may be wide rather than deep, though of course the deeper it is the better. It is necessary to have clear notions as to the various classes of animals, especially of the vertebrates, or those which possess a backbone.

These notions may be obtained from any good work on Natural History, and in these days of Free Libraries we need not be confined to the limited range of our own bookshelves. Then the subject may be taken in detail, with special reference to the animals of our own country (to which there are many excellent guides), and their relationships to the animals of other parts of the world. We should learn all we possibly can about their size and appearance, the places they frequent, the dwelling-places, above or underground, the kind of food on which they live, and whether they are in any way serviceable or harmful to man.

The first article of equipment must be a field-glass, which should be of as good quality as our purse will warrant. With regard to the particular make, everyone will, of course, please himself; but, in choosing a glass, two conditions are requisite—that it should have a large field of vision and clear definition. The next requisites are a notebook and pencil. Notes made on the spot, of a beast or bird, tree or shrub, will not only fix the circumstances of their environment in the memory, but will stand to remind us of the necessity of seeking further information on the subject. And we should have some kind of satchel or bag to hold any specimens which we may wish to bring home for further examination.

As autumn was passing into early winter the forest trees were glorious in their show of brilliant colour. Shades of red and brown and gold replaced the various tints of green of their summer foliage. But now oak and elm, and ash and beech are bare; and their outlines show up dark against the wintry sky, or are made conspicuous by a sombre background of pine woods. How has the change been brought about? Not, as one might at first suppose, by the agency of the wind. There is, so to speak, a temporary suspension of life. The leaves have done their duty, and pass away; the colour change was the signal for their approaching fall. If a fallen leaf be examined it will be seen that there is an enlargement at the



STOAT IN WINTER DRESS

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base of the leaf-stalk, by which it was attached to the bough. This remains soft and plump, though the leaf is dry and shrivelled and dead, owing to the stoppage of the supplies of water and sap. Across this cushion layers of cells are formed, which divide the tissues; the middle layer is absorbed, thus weakening the connection, and the leaf drops to the ground.

With the deciduous trees, which shed their leaves in the autumn, should be compared the evergreen trees, such as pine and fir, which flourish so abundantly in Britain. The fruits of the latter—generally known as cones—are worth more than a casual glance, as is the method of attachment of the seeds to the base of the scales which make up the cone. The trees are not only valuable, from a commercial point of view, for their timber, but also for affording shelter to cattle (for which reason they are often planted as wind belts) and in providing cover for wild animals.

The mammals—that is, those animals which suckle their young—stand at the head of the list, and with these we will begin. Between forty and fifty species of land mammals have inhabited the British islands within historic times. Of these the brown bear, wolf, wild boar, and beaver have been exterminated by human agency; while other four—the black rat, the brown rat, the rabbit, and fallow-deer—are not true natives, but have been introduced. Of course, no account is here taken of domesticated animals, as cattle, horses, and sheep.

The winter coat of cows and horses in the fields must attract attention from its rough appearance. This should bring home the fact that the operation of moulting is not confined to birds. Most housewives have practical knowledge of this, from having observed that the coat of the family pet dog or cat “comes off” in summer, though they may not have adverted to the reason. It will also emphasise the fact that all mammals are more or less covered with hair, and that in this respect, as in so many others, Man, “the roof and crown of things,” bears in his body the marks of his animal origin.

It is only natural to ask why, since there are over forty British mammals, one sees so very few in the course of a winter ramble. First of all, there are about a dozen bats; these at this period are in a state of torpor, rarely coming out except on warm evenings. The same reason applies

to the hedgehog and the squirrel—the former sleeps away the winter in a hole in a bank, lined with dry leaves and moss; the latter dozes for days together in its drey or open nest in the tree-tops, though it will often wake up in mild weather and feed on the provision it has laid up when food was plentiful, or support itself on the scanty nourishment to be derived from bark and twigs. The shrews are sound sleepers; but the dormouse is an easy first for the length of its nap; indeed, “sleeper” is a common name for it in some parts of the country. In the southern counties and the midlands it ought not to be difficult to find a winter nest, which consists of a ball of dry grass, the entrance to which has been closed by its occupant before retiring for its long rest.

Then it must be remembered that the predatory mammals, of which only a few are left to us, are for the most part nocturnal; they are more active by night than by day. They seek to avoid observation on the part of possible enemies, and to steal upon their prey unobserved and to seize their victims when they are incapable of defence or escape. It is at night that the fox prowls round the henroosts, or forages in the woods for such creatures as may come in its way.

The habit of storing provisions may suggest a subject for investigation. One sees it on a small scale in the hiding of bones or other food by dogs and cats, which often thus dispose of an over-abundant food supply. But it is among the rodents that the habit is best developed. Squirrels have been compared by Thomson to misers that hide their hoards; and the pikas, or calling hares of Siberia, lay up such stores of grass in miniature haystacks round their burrows that the sable hunters sometimes take advantage of the foresight of the little animals and carry off the stacks to feed their horses.

The stoat and weasel hunt their prey by day as well as by night, and one may often see these lithe, snake-like creatures running across the road, especially when it is bordered by woodland. There is a general resemblance, but the weasel is the smaller, and has a short tail corresponding in hue with the brown colour of the back, while that of the stoat is long with a bushy black tip. The stoat is remarkable for showing a seasonal change in the colour of its fur, which, in that condition, is known as *ermine*; and the name is given to the stoats them-

Natural History Rambles in Winter

selves in their winter dress, especially to those of Northern Europe and America, the fur of which is of considerable commercial value. Specimens in which the change has taken place are met with occasionally in England; and, strange to say, not always in the severest winters. The specimen figured on p. 268 was caught in a rabbit wire near Northiam, in Sussex, in

half were "the bushy-tailed species"—that is, stoats. Of course the young birds were the attraction.

In hard weather one may often find a dead mole, a very good subject from which to get some practical acquaintance with the structure of a mammal. The close, soft, velvety fur is one form of the normal covering of mammals, which may take such shape

as the bristles of the pig, the spines of the hedgehog, or the quills of the porcupine, but is never entirely absent, though, as in the whales, it may be reduced to a few bristles round the mouth. We know that the mole is a burrowing animal, and therefore look for the tools with which it excavates its subterranean galleries. These are the flexible snout which bores into the earth, and the spade-like hands which can be brought up on a level with it to remove the loosened soil. But we shall learn more about the creature if we look at it from the inside.

This is by no means difficult; nor does it require many implements. Many small

animals have been dissected, and the skeletons prepared without special apparatus, and with not more than an ordinary amount of patience. The mole should be fastened back downwards to a board, an incision made down the ventral (in this case the upper) surface from the throat to the point between the hind limbs, taking care not to cut too



FIG. 1.—COMMON MOLE

1897. For a long time there was considerable difference of opinion among naturalists as to how this colour-change took place; but now it is pretty well agreed that it is due to a moult. In one case, where a white specimen was trapped and kept in a ferret hutch till it resumed its brown coat, a quantity of shed white hair was found in the nest "similar to that found in ferrets' nests when they shed their coats." We must be careful not to confound this colour-moult of the stoat with the normal white coat of the ferret, which is an albino race of the polecat, modified by a long period of captivity or partial domestication.

It is well to learn something about the habits of these animals, preferably by observation. The weasel is to some extent serviceable to man, from the number of rats, mice, and moles it destroys; but several of these creatures will unite in hunting down a rabbit, and they are certainly enemies—though not to such an extent as stoats—to game preservers and poultry keepers. In one season ninety-eight "weasels" were shot or trapped in and near a pheasantry; but of these one-



FIG. 2.—SKELETON OF FORE-LIMBS OF MOLE

deeply. The skin may then be raised on both sides with a blunt knife, and worked back with the fingers. The limbs may be liberated by a slit down their inner surfaces; and in removing the skin from the skull it

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should be remembered that the latter is easily broken. There is no ear conch, but, in removing the skin from the throat, one will see a small silvery tube on each side. These open on the skin, and show that moles are not deaf, for they are the auditory canals. The mole may now be unfastened from the board, and the skin worked gently off the back.

Perhaps the first thing to strike one in the skinned beast is the immense mass of muscles clothing the fore-limbs, back, and breast, serving to operate the burrowing tools. The abdomen should be opened, and the intestines, stomach, liver, and kidneys (little bean-shaped bodies lying near the spine) removed, so that we can see the diaphragm, that membranous partition between the thorax, or chest, and the abdomen, which is complete only in mammals. If this is cut away we shall



FIG. 3.—SKULL AND JAW OF MOLE

open the thoracic cavity. When the heart and lungs are removed they may be thrown into a small vessel of water, and the mass will float. That this flotation is due entirely to the buoyancy of the lungs may be shown by detaching the heart, which will at once sink. As the eviscerated body lies on the rude dissecting-board it is not without interest, for it may serve to remind us that all mammals are formed on a common type, however widely some may seem to depart therefrom.

The cleaning of the skeleton is somewhat tedious, and not altogether agreeable. The usual plan is to cut off as much flesh as possible, and to macerate in water, from time to time removing as much as possible from the bones by means of a needle or stiff brush. (In such fashion the skulls and jaws illustrating this paper were prepared.) Or the carcass may be dried by hanging it up in the open air, and the bulk of the muscles removed before maceration. The sharp pointed teeth of the mole give a clue to the nature of its food, which is exclusively animal.

If the maceration be carefully watched, one may save parts from actual separation by stopping the process before the liga-

ments are decomposed. In fig. 2 the skeleton of the fore-limbs is shown; and this, taken in conjunction with the muscle mass, will explain how the mole burrows so well and so rapidly. The fore-foot, corresponding to the human hand, is broadened by an additional bone (*f*); *a* corresponds to the fore-arm of man; *b* to the upper arm; *c c* to the collar-bones, and *d d* to the shoulder-blades.

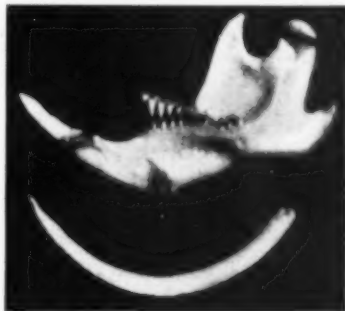


FIG. 4.—JAW AND INCISOR TOOTH OF WATER-VOLE

The water-vole, usually miscalled the water-rat, may often be seen at the mouth of its burrow, sitting up like a squirrel, holding its food, usually the stems of flags or horsetails, in its fore-paws. It may be readily distinguished from a true rat by

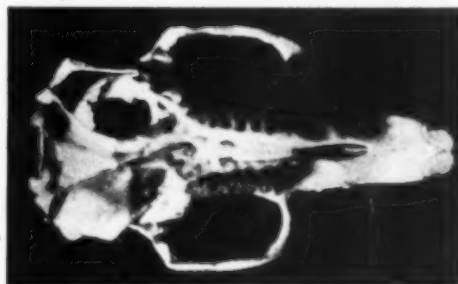


FIG. 5.—SKULL OF WATER-VOLE

the much blunter muzzle and short limbs and tail. It is very common all over the country, and though it lays up a store of provisions, it does not appear to become torpid in winter. A good deal of controversy has been carried on with regard to the food of this animal, which belongs to the rodents (the family containing rats,

Natural History Rambles in Winter

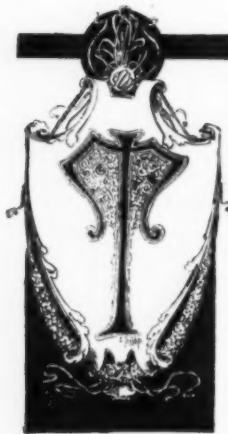
mice, squirrels, porcupines, etc.) Some maintain that it is quite a vegetarian, while others assert that occasionally it indulges in animal food in the shape of insects, mice, and young birds. To these may be added fish and molluscs. Mr. Arthur Patterson, a well-known naturalist of Yarmouth, has seen water-voles eating roach which he had left on a bank in Heigham Sound; and in 1896 he was kind enough to give me convincing evidence that they sometimes broke open and ate the large fresh-water mussels so plentiful in that neighbourhood. But this flesh-eating is probably a departure from their usual habit, as one may gather from the character of their teeth.

In the illustration (fig. 5) the skull is shown with the lower jaws removed. The specimen was shot for me by a friend, who regretted, as I did at the time, that it was badly shot in the head. But that enables me to emphasise a point worth notice—the auditory bulla—which serves to intensify sound vibration. Though the shot has unfortunately carried away that on the (animal's) right side, its very absence emphasises that on the left. In fig. 4 we have the right jaw, and beneath that an incisor tooth (the part of which in use

is yellowish-orange) removed from the socket in order to show its great length, and the peculiar character of these teeth in the Rodentia or gnawing animals. These grow from a persistent pulp, and their length is regulated by the wear of one tooth upon the other. Many cases are recorded where one tooth has been broken and the other has attained enormous dimensions, sometimes preventing the animal's feeding, and so causing death.

In thus utilising what we may find in a winter ramble care should be taken not to develop a mere habit of collecting, which is of no real value—nay, practically harmful. But if the commoner mammals be roughly dissected, and compared with the standard each carries in his own body, we shall provide ourselves with occupation for winter evenings, and lay a foundation on which to raise a superstructure of solid knowledge. And we shall appreciate, to some extent, the marvellous adaptability of the vertebrate skeleton if, for example, we consider the human arm and hand as the highest expression of a fore-limb, and compare therewith the various modifications and uses of the fore-limbs among the lower mammals.

Dick King's Ride



HE adventures of a Kimberley despatch rider formed the subject of a recent telegram. They remind us of another ride famous in the history of Natal, in days when neither railway nor telegraph had been dreamt of there. It was at the time when the occupation of Natal was first resolved upon by the English,

and the Dutch had made their protest from Pietermaritzburg, of which they were then in possession. A small body of English soldiers—infinitesimal in comparison with the forces moving to-day—had been despatched to make good this claim, and had taken up their position outside Durban,

which was then a small town with a few hundred inhabitants. The incidents which followed will be read with interest now, as told by Dr. Russell in his "Story of Natal."¹

"Captain Smith's march up the coast was long and fatiguing. It was the rainy season, and the numberless swollen rivers caused much delay. The south coast route is sufficiently toilsome at the present day, but the roads before they were made must have aggravated considerably the difficulties of the constant declivities and ascents. In many places Captain Smith had to cut a way for the baggage waggons through the almost tropical vegetation of the river valleys. The soldiers saw hippopotami in plenty, and often came across the spoor of lions and elephants in the forest glades. . . .

"After the force crossed the Umkomaas every pre-

¹ "Natal, the Land and its Story : A Geography and History for the use of Schools." By Robert Russell, Superintendent-Inspector of Schools, Natal. It is characteristic of the general intelligence of the colony that it counts such a volume among its school-books. The "Annals of Natal," including many documents of historic value, may be studied in the more elaborate work of the late John Bird, who was specially qualified for his task by years of varied service.

Dick King's Ride

caution was taken to prevent surprise on the march. Between that river and the Umbilo, Captain Smith and his men were met by four Englishmen who had ridden out to welcome them. At Sea View, near Umbilo, the troops halted, and the English residents there expressed their surprise at the smallness of the force sent to overawe fifteen hundred Boers, fully armed. 'Some one had blundered,' but Captain Smith's duty was clear. Shortly after leaving Umbilo, two mounted Dutchmen met the troops and protested in the name of their countrymen against the advance. . . . No further opposition was made, and Captain Smith took up his quarters on the flat outside Durban. . . . The Englishmen in Durban at once ranged themselves on the side of their flag.

"After the arrival of the English soldiers, armed Dutchmen began to congregate at their village of Congella, distant about three miles. Andries Pretorius, the Commandant, was among the first to arrive. Two messages were sent to the English commander, requesting him to leave Natal. Of these Captain Smith took no notice. This was followed by the farmers seizing a number of cattle belonging to the troops. The English commander had orders to avoid hostilities with the Boers if possible, but their irritating conduct exhausted his forbearance and he determined to dislodge them from Congella.

"His plan was to surprise them by a night attack. . . . He left the camp at eleven o'clock with 138 men and two field-pieces. To avoid marching through thick bush, the men were led from the camp to the beach of the Bay. The tide was out and it was bright moonlight. A howitzer was fitted into a boat, which under the charge of a sergeant of artillery was to drop down the channel to within 500 yards of Congella. The troops were to form under the cover of its fire and that of the two six-pounders taken with them. With the Bay on the left and a dense thicket of mangroves on the right, the little force made its way along the sands to a point near the Congella camp where the line of mangroves abruptly ended in an open space. It is certain that the English troops had been watched all the way, and that Pretorius knew of the intended attack a few minutes after they had left the camp.

"Just as Captain Smith's men reached the end of the mangrove-trees the stillness of the night was broken by the rattle of musketry, and a deadly fire was poured into their ranks. Every shot had its effect. Twenty-five Dutchmen, hidden by the trees, lay on the ground levelling their long guns against the trunks and shooting down their antagonists as they came out in bold relief against the moonlit sands. The soldiers returned the fire, but mistaking mangroves for men they aimed too high and did no execution. Much confusion was caused by the oxen that drew the gun-carriages being maddened by wounds. The boat with the howitzer could not get near enough to be of any service.

"Captain Smith, seeing his men fall round him like withered leaves, thought it expedient to retreat. The tide was rising, and the soldiers had to splash their way back through mud and sand. Many got into deep water and were drowned. The two six-pounders with their ammunition were left unspiked to the Boers. The survivors reached the camp at two o'clock in the morning. Out of the 138 men who had left three hours before, only 87 returned from that fatal midnight march. The missing men were accounted for

next day when the dead and wounded were sent to the English camp by Pretorius. The farmers had treated the wounded men with the greatest humanity, and in some cases had rescued them from being drowned by the rising tide.

"Captain Smith's position was now one of great danger. The farmers demanded his surrender, and he asked for a truce of twenty-four hours to bury the dead. The request was readily granted. Captain Smith then asked for an armistice of seven days to enable him to consider his position. To this his opponents also agreed. The English force was reduced by nearly one-half, and it was evident that to obtain relief the Cape Government must at once be apprised of the perilous situation. Captain Smith took counsel with Mr. George Cato about sending a messenger with despatches to Grahams-town. Mr. Cato offered to go himself, but the commandant demurred to the absence of so valuable an ally.

"Another volunteer was soon found in Mr. Richard King, ever gratefully remembered as Dick King, one of the early settlers, then farming at Isipingo. In the dusk of the evening following the disaster at Congella, two boats, each towing a horse, were rowed across the Bluff Channel, Richard King and George Cato in one, and Christopher Cato in the other. Landed on the Bluff beach, Dick King, like 'Sir William of Deloraine, good at need,' and mounted on the 'wightest steed' the garrison could bestow, started under cover of night on his six hundred miles' ride to Grahamstown. By keeping along the base of the Bluff and the coast hills as far as Umlaas he avoided the Dutch scouts who were posted round Congella on the opposite side of the Bay.

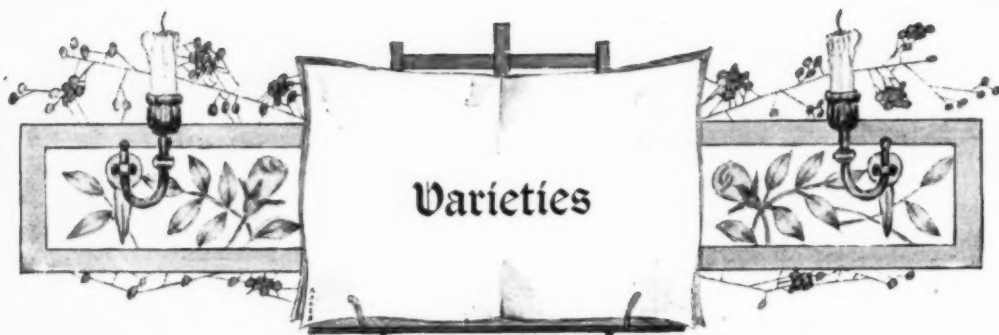
"Before daybreak he had crossed the Umkomaas, and was safe from pursuit. His track then lay through a savage country. Although King knew the native language and all the tracks and by-paths on his route, no one but that doughty Englishman himself can ever know the fatigues and perils of his adventurous ride. Bridges and punts were unknown in those days, and he had to swim the rivers where ford there was none. Once, near the Umzimvubu, he was in danger of his life from a party of the Amabaca. These natives had not forgotten the raid on 'Ncapai, and they mistook the travel-stained horseman for a Dutch farmer. Their attitude changed when they learned his errand. At the Wesleyan mission stations in Kaffraria he received every attention.

"King spared neither himself nor his horses. Ten days after leaving the Bluff he rode into Grahams-town more dead than alive and delivered his despatches to the Resident Agent, Mr. Shepstone. He had accomplished a feat scarcely ever equalled for pluck and endurance; and the 'hurrying hoofs' of Dick King's steed

'Now soft on the sand, now loud on the ledge,'
will be heard

'Borne on the night-wind of the Past,
Through all our history to the last.'

The Dutch laid siege to the little English camp. Nearly a month passed after Dick King started on his perilous journey. Then one night rockets from the outer anchorage announced that the messenger had done his work, and that reinforcements were at hand.



The Monument to Oliver Cromwell

LORD ROSEBERY's speech at the Cromwell Tercentenary Meeting in the Queen's Hall, London, was worthy of a great occasion. It was on the day when Mr. Thornycroft's statue of Cromwell was unveiled at Westminster. Lord Rosebery's manly repudiation of the idea that Cromwell was a hypocrite will not be forgotten by those who heard it. His appreciation of the Great Protector's spiritual power must have been a revelation to many of his hearers. "Cromwell," he said, "was a practical mystic. A man who combines inspiration apparently derived—in my judgment, really derived—from close communion with the supernatural and the celestial, a man who has that inspiration and adds to it the energy of a mighty man of action; such a man as that lives in communion on a Sinai of his own, and when he pleases to come down to this world below seems armed with no less than the terrors and decrees of the Almighty Himself." For the life of the individual, of the statesman, of the nation, this is surely the secret of true power.

Opinions

I BELIEVE that God made men of infinite variety of opinions. I long for more of brotherhood in every department of human life—not to insist upon identity of opinion, but enlargement of heart. I have recently been spending some weeks in Burns' country, and paid a pilgrim's visit to his farm. I venture to say that we Christians might draw a lesson from the faith of the great poet,

"That man to man the world o'er
Shall brothers be for a' that."

—*Dr. Butler, Master of Trinity.*

The Weather

TALK of the weather? Yes, and why not. What topic offers so many advantages?

The shy man would shrivel up if he were expected to start at once some serious discussion. Ill-temper abuses the weather, it is a safety-valve, and the weather no worse. Good-

humour has so much to say in its praise that people begin to look cheerful. You meet an opponent to whom you have been but lately



OLIVER CROMWELL

From the bronze statue by Hamo Thornycroft, R.A.
(By permission)

reconciled. There is hardly a subject you can safely broach; then keep to the weather. A friend comes up, and for the moment you forget what question you so much wished to ask him. Let him run on about the weather, it will give you time to recollect. On weather prospects the most irritable may disagree without bitterness. Weather in England is seldom monotonous. We can make quite new remarks tomorrow. *Vive le Temps.*—M. A. G.

Navigating the Air

MAJOR BADEN-POWELL recently visited the "dockyard" wherein the great aerial steamship of the future is being fashioned. Should the project fail it will yet be remembered as one of

upon it, and a commission, including many of the leading scientific experts in Germany, have approved the plans."

A Large Cheque

A KIMBERLEY correspondent has been good enough to send us the following interesting particulars of what is probably the largest cheque ever drawn upon a bank:

"I enclose you a photo of a cheque drawn on the Cape of Good Hope Bank here by the De Beers Consolidated Mines, Limited, on July 18, 1889, for the sum of £5,338,650 in favour of the Liquidation of the Kimberley Central Diamond Mercury Company. For the information of your readers I may mention that the above sum



the great experiments of the century. He says: "I was immensely impressed on entering the great wooden building erected on a floating raft to see what appeared to be the slender skeleton of some huge vessel, as big as one of our most powerful battleships, but of such delicate material as rather to suggest a stupendous birdcage. This, made entirely of aluminium, is the framework on which the outer skin is to be stretched. Inside a number of large balloons will be placed. Underneath are the gallery and the cars, all of aluminium, and here are the engines with which to drive the vessel, it is hoped, at the rate of 22 miles an hour through the air. The total lifting capacity will be about 10 tons, which should enable the vessel to carry sufficient stores and ballast to remain in the air for some days. All this may sound like some dream, but it is stern reality. It is said that altogether something like 70,000*l.* has been spent

represents the precise amount paid to and divided between the shareholders of the Kimberley Central Diamond Mercury Company after the payment of all its liabilities by the De Beers Consolidated Mines, Limited, the property sold being the Kimberley Mine. The enclosed is the largest cheque ever issued in South Africa, or perhaps elsewhere."

Trek Oxen

GREAT care has to be taken in feeding the oxen and in regulating their hours of work. Fifteen miles is a good day's march, and in the rainy season it is doubtful whether ten miles can be exceeded. Trek oxen are never inspanned for more than eight hours a day, or for more than four hours at a time. They must rest for two or three hours between marches, and should never work during the hour after sunrise or

Varieties

during the hour before sunset. These drawbacks are not without compensations. Sixteen or eighteen oxen will carry a load of from 6,000 lb. to 9,000 lb. in a tented waggon weighing about 29 cwt. Each team has a leader, or voerlouper, who walks in front and guides, while the driver encourages the cattle to pull together by cracking a raw hide lash 12 ft. or 18 ft. long, attached to a bamboo stick.

A Practical Test

A SCOTSMAN went to London for a holiday. Walking along one of the streets, he noticed a bald-headed chemist standing at his shop door, and inquired if he had any hair restorer. "Yes, sir," said the chemist; "step inside, please. There's an article I can recommend. Testimonials from great men who have used it. It makes the hair grow in twenty-four hours." "Aweel," said the Scot, "ye can gie the top o' yer heid a bit rub wi't, and I'll look back the morn and see if ye're tellin' the truth." The chemist returned the bottle to the shelf, and kicked the errand boy for laughing.

Ezra, Second Chapter

ARCHDEACON BRADY of Pennsylvania, in the American Episcopal Church, tells some interesting stories of his experience when he was an itinerant clergyman in Kansas. One of these relates to a lay reader, a friend of his, who conducted services in another mission. He had been a stout old soldier in his day and was a first-class man, but his knowledge of Hebrew was limited, and his pronunciation of the unfamiliar Bible names was a thing at which to marvel. When he opened the Bible upon one occasion to read the lesson he could not find the place, which was in one of the minor prophets (great stumbling-blocks to older and more experienced men, by the way), and after turning his pages nervously for some minutes in the face of the tittering congregation, he finally opened the book at random and began to read. As it happened he lighted upon one of the genealogical chapters in Ezra, the second. He stumbled along through half a column of Hebrew names and finally turned the leaf in the hope that there would be a change in the substance of the chapter on the other side. What he saw proved too much for him, for after one frightened glance he closed the reading in this way: "And a page and a-half more of the same kind, brethren."

General Grant's Advice to the Young

WHEN General Grant was President of the United States in 1876, the Centenary of American Independence was being celebrated. At the request of the editor of the "Sunday School Times," the President sent the following message to the children and youth of the United States.

"My advice to Sunday Schools, no matter

what their denomination, is: Hold fast to the Bible as the very charter of your liberties; write its precepts in your hearts, and practise them in your lives.

"To the influence of this book are we indebted for all the progress made in true civilisation, and to this we must look as our guide in the future.

"Righteousness exalteth a nation: but sin is a reproach to any people."

The Most Famous of English Orations

"THE most famous of all English orations" is the description which Lord Rosebery gives of Sheridan's speech in the House of Commons on the impeachment of Warren Hastings in January 1787.—*Pitt, by Lord Rosebery.*

The Fashionable Bonnet

"THE guarantee required by the purchaser of a fashionable bonnet apparently is that it can be worshipped without breaking the commandment. There must be nothing like it in the heavens above, nor in the earth beneath, nor in the waters under the earth; and in many cases there is not."—*Triumphant Democracy, by Andrew Carnegie.*

Astronomical Notes for January

THE Sun rises in the latitude of Greenwich on the 1st day of this month at 8h. 8m. in the morning, and sets at 3h. 59m. in the evening; on the 11th he rises at 8h. 5m. and sets at 4h. 12m., and on the 21st he rises at 7h. 56m. and sets at 4h. 27m. He is in perigee or nearest the Earth on the morning of the 2nd. The Moon is New at 1h. 52m. on the afternoon of the 1st; enters her First Quarter at 5h. 40m. on the morning of the 8th; becomes Full at 7h. 8m. on the evening of the 15th; enters her Last Quarter 7 minutes before midnight on the 23rd; and becomes New again at 1h. 23m. on the morning of the 31st. She is in perigee or nearest the Earth about 5 o'clock on the evening of the 3rd; in apogee or farthest from us at the same hour on the 19th; and in perigee again about midnight on the 31st. No eclipses or other special phenomena of importance are due this month. The planet Mercury will be visible before sunrise in the first week, situated in the constellation Scorpio. Venus is increasing in brightness as an evening star, and moves during the month from the constellation Capricornus into Aquarius; she will be in conjunction with the small crescent Moon on the evening of the 3rd. Mars is not visible, being in conjunction with the Sun on the morning of the 16th. Jupiter rises earlier each morning (about half-past 3 o'clock at the end of the month) in the constellation Scorpio. Saturn will scarcely be visible this month, rising only a short time before the Sun.—W. T. LYNN.

Science and Discovery

BY PROFESSOR GREGORY, F.R.A.S., AND J. MUNRO

Telegraphing 100,000 words an hour

PARTICULARS of the Pollak-Virág system of high speed telegraphy, which was recently put to the test between Budapest and Vienna, in the presence of a number of technical officials, have now been published in the electrical papers. Upon a line 400 miles long a speed of 100,000 words an hour was attained, and all the messages transmitted at this rate could be distinctly read at the receiving station. This is a remarkable result, and the natural conclusion from such a bare statement is that a message of say 1,500 words could be taken to an office at which the system was at work and would be received at the other end of the wire in about a minute. As a matter of fact this cannot be done. The message to be transmitted has first of all to be perforated upon a strip of paper, and the quickest operator could hardly perforate more than 1,500 words an hour. Many operators could of course be engaged in

the current impulses received from the transmitting station. Particular combinations of positive and negative currents signify particular letters; so the wavy line obtained can readily be deciphered by anyone acquainted with the code of signals. As, however, time is required for translating and transcribing the message, as well as for preparing the initial perforations, the new system has only a limited application, though the actual rate of transmission of messages is very high.

Waterspouts

WATERSPOUTS are seen very frequently on the coast of New South Wales, and Mr. H. C. Russell gives much information concerning them in a paper recently read before the Royal Society of the colony. The series of pictures here given represent the changes which a waterspout underwent in little more than half-an-hour. The estimated length of the column shown in



(FIGURES 1-6) A SERIES OF CHANGES OBSERVED IN A WATERSPOUT AT SYDNEY, NEW SOUTH WALES

preparing the message in this way, but this limits the usefulness of the invention. Once the strip of paper has been perforated in the required manner, the message can be sent at the rate mentioned, by letting the strip run over a metal roller kept in rapid motion by clockwork, and electrically connected with the telegraph wire. A slot on one edge of the strip causes a positive current to traverse the wire, and a slot near the other edge causes a negative current to flow along it. At the receiving station the currents pass through a telephone the diaphragm of which is moved in a direction determined by the current impulse. This movement is communicated to a small mirror upon which a beam of light is made to fall. The light is then reflected to a strip of sensitive paper kept in motion, and thus a record is obtained of


fig. 1 was 400 feet, and the diameter from 40 to 50 feet. In fig. 2 the top and base had enlarged, and the water-sprays about the base seemed to rise 100 feet, indicating great rapidity of rotation, while an intense roaring noise was heard. The column then broke for a short time and took a conical shape, the water below the vortex spraying up to a height of about 20 feet. The waterspout afterwards re-formed, but with less intensity, and then gradually disappeared. At first sight it would seem that the columns, such as are shown in the illustration, actually carry up into the clouds enormous quantities of water as if they were metal tubes, but the facts of observation do not support this view. A waterspout is really produced by wind whirling with high velocity, as it does in a tornado. When such a vortex passes over a water surface the wind

Science and Discovery

breaks up the water into spray, which is carried round the vortex, but not into it. In a large waterspout an immense amount of spray can be carried up by the wind in this way, and if the wind suddenly ceases the spray falls in mass as if it were a continuous flow of water. Occasionally a number of fish are taken up with the spray, and in some cases are dropped upon land a considerable distance from the water over which the whirlwind had travelled.

An Ancient Sign of the Cross

SOME readers of these notes may have remarked that the covers of the latest edition of Mr. Rudyard Kipling's works, published by Messrs. Macmillan & Co., are impressed with

the mark , known as the Swastika. This

sign is the earliest known symbol, and is found on writings and monuments almost all over the world. Many theories have been presented concerning the symbolism of the Swastika, its relation to ancient deities, and its representation of certain qualities, and an elaborate monograph upon it, by Mr. Thomas Wilson, was published a short time ago by the United States National Museum. The common people of India, China, and Japan regard the sign as a symbol of long life, good wishes, and good fortune, and at least one Buddhist religious sect reverences it as a holy and sacred character. The Indian merchant paints the sign in his ledger or draws it over his door. The outside of village shrines is often covered with rude representations of the mystical Swastika; most of the inscriptions on the Buddhist caverns in Western India are either preceded or followed by it, and it is found also on many Brahmin monuments. In an ancient Chinese work, the original Buddha is represented with a Swastika drawn upon his breast, and the mark appears in the footprints of Buddha engraved upon the solid rock on the mountains of India. Many Christian archaeologists regard the sign as the most ancient form of the cross, but numerous theories have been put forward to account for its origin, and almost the only point upon which authorities agree is that the Swastika is a very old symbol of benediction or of good augury.

Effects of Weather upon Conduct

THAT there is an intimate relation between the condition of the weather in a given place and the mental state of its inhabitants has seemed evident to many observers and writers. Byron once wrote, "I am always more religious on a sunshiny day, as if there were some association between the internal approach to greater light and purity and the kindling of this dark lantern of our external existence." And does not Shakespeare make Benvolio say in "Romeo and Juliet"—

"And, if we meet, we shall not 'scape a brawl,
For now, these hot days, is the mad blood stirring?"

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Professor Dexter, of Colorado, has recently investigated this interesting question in a scientific manner, and has arrived at some remarkable results. He has collected valuable information, including facts concerning the behaviour of children at school on days with different kinds of weather, and statements from warders of prisons and penitentiaries, superintendents of asylums and reformatories, showing how the unfortunate inmates of such institutions are affected by the weather. The deportment and work of public school boys and girls in New York are found to be at their best on cold, calm, and clear days. On muggy days both conduct and diligence are at their worst, and, strange to say, boys are influenced more than girls. From the mass of suggestive observations dealing with the conduct of maturer citizens, it is worth noting that unseasonably hot days of spring and autumn, even though the actual temperature be much less than that for summer, always bring with them the largest number of assaults by men. The number of persons being disciplined in penitentiaries is greatest during periods of excessive temperature. The number of errors made by bank clerks seems to be affected in a somewhat peculiar manner; these mistakes are greatest on days when the clerks feel most confidence in themselves, whereas, during less favourable weather, when the men feel likely to make mistakes, they exert greater care, and in this way do better work.

The Heat of a Star

MR. NICHOLS, of the Observatory, Chicago, has invented a highly sensitive instrument for measuring radiation. It is a form of the Crookes' radiometer, and can indicate the heat of a candle directed on it by a telescope at a distance of eighteen miles. The heat from the star Vega is equivalent to that from a candle eight miles away.

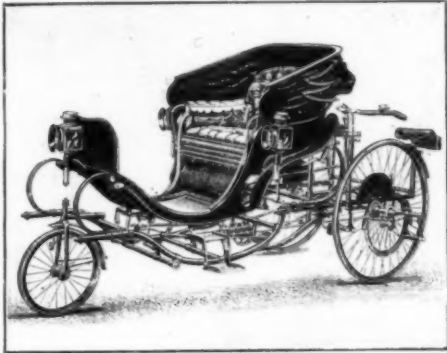
The Neomylodon

SEÑOR AMEGHINO discovered the fossil remains of a mylodon about the size of a young boar in certain South American strata, and expressed the opinion that this new animal might not be extinct. Its nocturnal habits, and the wild character of its habitat in Tierra del Fuego, would account for naturalists not having seen it alive. A recent Swedish expedition, under Herr Otto Nordenskjöld, has actually found a skin and bones of the animal not fossilised in a cave of Tierra del Fuego. The skin is thick, and has bony plates embedded in it, with long flexible hairs on the outside. Some half-eaten straw and other *débris* of its lair were also found in the cavern, and it seems probable now that a living neomylodon may yet be discovered.

A Cycle Car

THE interesting style of carriage which we illustrate has been built for the Emir of Afghanistan by an English firm. It is not a motor car,

though it looks like one, but rather a tricycle, composed of a front wheel and two hind monocycles, on each of which an Afghan sits and



TRICYCLE CARRIAGE

propels his sovereign by working the pedals. The carriage is very light, and attains a speed of about fourteen miles an hour. Why should not hansoms of the kind be adopted in our cities?

Spontaneous Combustion of Hay

ACCORDING to the experiments of M. Mer, communicated to the National Society of Agriculture in France, hay ignites spontaneously from the heat of fermentation when it has been stored in a damp state. It is probable that a heat-loving bacteria or "thermophile" is instrumental in the process. Be that as it may, M. Mer concludes that hay should never be harvested on the day it is cut, even though it seems dry. Damp hay should not be heaped up too much, and hay-lofts should be of timber rather than masonry, for the wood permits a circulation of air. If, in spite of such precautions, the hay grows too hot, it is necessary to aerate it by deep trenches cut into the mass.

A New Ceramic Stone

M. GARCHEY, a French chemist, has invented a preparation of glass which is coming into favour as a building material. It is made by heating broken glass to a temperature of 1250 Centigrade and compressing it into moulds. The molecular state of the glass after this treatment renders it very strong, and it resists the action of acids, whilst it can be worked with hammer and chisel. It is used for pavements and coloured plaques for decorating the interiors of buildings—for example, the new Métropolitain de Paris.

Steam Pilot Boats

THE pilots of New York and Liverpool have adopted small screw steamers in lieu of the old sail boats. Some are the property of the Con-

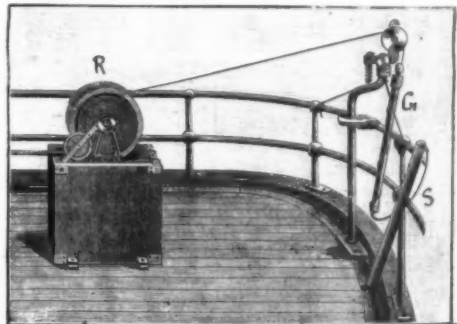
solidated New York and Sandy Hook Pilot Association, and have different stations. That in the mouth of the Gedney Channel is the "New York," which not only furnishes pilots to incoming, but picks them up from outgoing vessels. The Mersey has two steam pilot boats, with triple expansion engines capable of keeping their speed about 10½ knots. They are similar to the cabmen's shelters, and give comfortable sleeping quarters to the pilots who are waiting to be called by vessels.

The Oil Fish

It has been stated that a full-grown "palu" or "oil fish" of the Pacific attains to 6 feet in length and weighs 150 lb., but according to Mr. White, in a monograph on Funafuti Atoll, published by the Australian Museum, Sydney, an average "palu" weighs only 40 to 60 lb. and is 3 to 4 feet long. Every part of the fish is edible; the head and bones can be boiled into a rich jelly. The flesh dissolves without putrefying into oil, which is a powerful purgative. The "palu" is caught by hooks at night in depths of 120 to 500 fathoms. The mystery about the fish is now solved, for Mr. Waite identifies it as the well-known "Escolar" (*Ruvettus pretiosus*) of the North Atlantic.

A Pressure Sounding Machine

THE old "lead line" for sounding the depth of the sea was of rope, with knots to mark the depth, and a plumb of iron primed with tallow to catch a sample of the bottom. The new sounder of the best type is a pianoforte steel wire run off a reel, and carrying at its end a cylindrical sinker primed with tallow after the

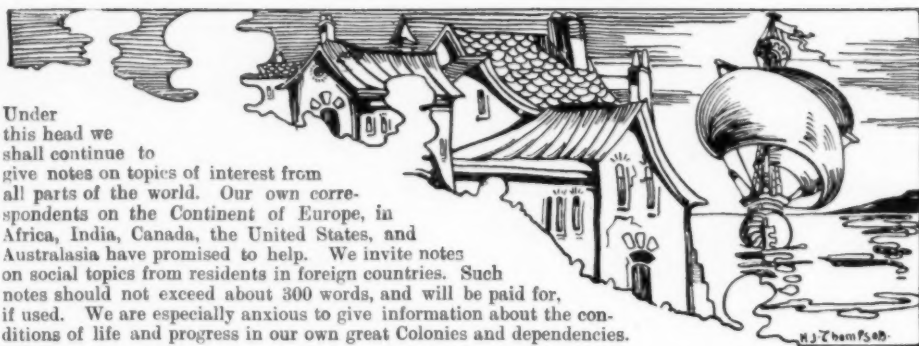


SOUNDING MACHINE

old fashion, and in addition a pressure gauge which marks the depth by the pressure of the water forcing a piston up a tube against the resistance of a spiral spring inside the tube. Our illustration shows one for use in ordinary navigation, where R is the reel on the deck of the ship, G is the pressure gauge, and S is the sinker. The apparatus works up to ninety fathoms.

Over-Sea Notes

Under this head we shall continue to give notes on topics of interest from all parts of the world. Our own correspondents on the Continent of Europe, in Africa, India, Canada, the United States, and Australasia have promised to help. We invite notes on social topics from residents in foreign countries. Such notes should not exceed about 300 words, and will be paid for, if used. We are especially anxious to give information about the conditions of life and progress in our own great Colonies and dependencies.



South Africa

One of the great drawbacks to farming in Cape Colony has been the inadequate supply of water. The soil is rich and fertile, but land and stock suffer from drought. Now, however, a silent development is coming about which will revolutionise the face of the country and turn the dry Karoo into a smiling garden. In 1891 the Government began systematically to prospect for water, and found that there is not far below the surface an almost inexhaustible supply of water, in the Upper and Lower Karoo. On an average the boring was not continued more than fifty feet; the yield was something under 1,000 gallons an hour. As the Government has been sinking at the rate of between two and three hundred wells a year, it may easily be seen what this implies. Add to this, private enterprise, where individuals have used Government drills, and the work done by the late Government expert now prosecuting the work independently, and the daily increase of the water-supply becomes significant. It is not probable that deep boring would be successful. Irrigation is not likely to be profitable if experience here is a test, but for watering stock, for gardens, orchards, plantations and mills, this clear water will be an inestimable boon. Farms on which water has been struck have risen immediately fifty per cent. in value.

Many changes will come about. Farmers will no longer need to trek weary distances with their cattle in search of water, and nomadic habits will die out. Farms will be worth more and be cut up. A larger population will find a

living, and a more intelligent and enterprising race come in. A great increase in produce will take place, and the Colony within a few years may be able to rely on itself for its own food-stuffs, and so wipe out the reproach that has been justly fixed on it so long.—G. G.

The New Open Port in North China

THE new Open Port is an island on the North-western shores of the Gulf of Peichili, six hours' run by train from Tientsin, and is called Ching Wan Tao. As a port it is still in its most incipient stage, there being only two foreigners as yet resident there—engineers who are planning a breakwater in order to secure a good harbour. The port is about an hour's run by train from Shanghaiwan, the border town between old China proper and Manchuria, to which the railway goes from Tientsin and where the Great Wall of China runs right into the sea.

The summer resort is fourteen miles to the west of Ching Wan Tao and is called Pei Tai Ho. Though at present so far distant, it is to be included as part of the Open Port, the same Customs officials serving for both. As a resort in the great heat during the months of July, August, and September, it has already proved a great success. It may be remembered that Sir Claude Macdonald and Sir Robert Hart were both at Pei Tai Ho last September when the *coup d'état* took place in Peking. This summer it has been reckoned that the foreign population, including children, cannot be less than 450, and is perhaps more nearly 500.

There are in Pei Tai Ho three distinct settlements, widely separated along the shore, usually distinguished respectively as East Beach, Rocky Point, and West Beach. From the extreme East and West points the distance is about six miles.

The surroundings are very lovely. The houses are mostly built on top of cliffs or on gentle slopes that command a fine view of the many lovely bays and promontories, while others on higher slopes farther back have, in part or in whole, a view of the splendid, much-serrated mountain range that bounds the view on three sides, besides having a wider view of the Gulf. The sunset and sunrise effects on mountains and sea are often glorious to behold.

One great drawback to settling for any length of time at this summer resort is the great distance between Pei Tai Ho railway station and the three settlements. The station-master provides chairs with four bearers, or donkeys to ride on, for the passengers, and carts for luggage. After heavy rain some of the many gullies to be crossed are impassable, the passengers in that case having to remain at the station till the water is lower, the more adventurous sometimes swimming across! These gullies will be bridged over by the railway, and there is to be a good bicycle path at the side of the track. Electric cars to connect the three settlements together is another proposition.

The main export at this new port will be coal from the Kaiping mines that are passed by the traveller between Tientsin and Pei Tai Ho.

The present visitors belong to the Legation, Consular and Customs services, or are merchants or missionaries from various parts of North China, a few coming from so far South as Shanghai. Younger missionaries have their Chinese teachers and go on with the study of the language—some of them preparing for very stiff examinations. The more experienced have their Chinese writers and are doing literary work. Some are bringing out a new arithmetic for use in their schools, others are preparing Sunday School lessons in Chinese for the next quarterly course. There are ten lady M.P.'s and six male at the three settlements; these are ever ready to help in time of sickness.

It may interest readers to hear something also of the new German Port, Kiao Chao, on the south side of the Shantung promontory. One who visited that port lately writes that it seems likely to become one of the most beautiful and prosperous ports in China. Foreign houses are

going up rapidly. A hotel of eighty rooms is already under roof. Ten thousand coolies are at work. It will be a wonderful place in ten years. Protestant missionaries, both German and American, are there.—M. R.

Americans and the Chinese

THE eagerness which American manufacturers are now showing to extend their trade with China has lately led Wu Ting Fang, the Chinese Minister at Washington, to make an earnest appeal to the American people to induce Congress to repeal the hard Exclusion Law which, since 1884, has been in operation against Chinese labourers. The law is so strict, and it is so vigilantly enforced, that for five or six years past no Chinese labourers have been permitted to land in the United States. There are still about 120,000 Chinamen in America, who arrived before the door was so tightly closed against them. Many of these Chinamen naturally desire to revisit their native land, but they cannot do so and return to the United States, unless, before they leave, they obtain identification papers, and unless they leave some property behind them. The Chinese Minister at Washington, in view of the efforts to extend American trade in China, and in view also of the fact that there are large numbers of Chinamen in the new insular possessions of the United States, whose legal status has not yet been determined, has been more outspoken than any of his predecessors in his remarks on the American Exclusion Laws. He made his appeal for a return to easier immigration laws at a concert held at Philadelphia for the promotion of American trade in the East, and in this appeal good-humouredly showed that Chinamen desired to enter the United States only for the same reason that American manufacturers and capitalists were so anxious for the open door in China. "These men," he said, referring to his fellow-countrymen, who would like to be permitted to land in the United States, "do not rob you. They work night and day and make faithful servants. I admit that they want to make a few dollars and go home. But is not that just what you Americans who come to China want? I believe that to get the trade of China it is worth while to repeal this objectionable law." But, harsh as this law is, and lacking as it is in any spirit of reciprocity, public opinion in America has supported it and has endorsed the vigilant methods which are in use to enforce it; and although American manufacturers are prepared to see the law repealed in order to help them in their trade relations with

Over-Sea Notes

China, neither party in American politics dares move towards repealing the law, unless it is prepared to dare the opposition of the labouring people from the Atlantic to the Pacific Coast.

E. P.

Karnak

AMONG the earthquake desolations of the past year we may note the fall of the columns of the great temple of Karnak. Professor Sayce writing to the "Times" says:

"The catastrophe occurred at 9 A.M. on October 9, and is supposed to have been due to a slight shock of earthquake. Eleven columns in all

have fallen in the fourth and fifth rows north of the axis of the temple, and between this and the wall Seti I. They all fell in a straight line from east to west, the result being that the westernmost is still partly propped up against the pylon of the temple. The ruin is terrible, and if the hypostyle is to be saved it must be done at once. The columns can be set up again, but the architraves above them are utterly broken and destroyed.

"M. Legrain, who has been engaged for the last three years in repairing and strengthening the ruins of Karnak, started for Upper Egypt immediately upon hearing of the disaster."

The Fireside Club

LITERARY COMPETITIONS

PRIZE QUOTATIONS

On Conversation

1. "Conversation was not then (in Madame Sevigné's days) small coin, to be paid out hastily like car-fare, merely in order to get from one necessary topic to another. It was the golden mean through which generous regard, a graceful courtesy, or a sparkling wit, lent beauty and distinction to every hour of intercourse."—*A. Repplier.*

2. "With thee conversing I forget all time."

Milton.

3. "By the crackling fire,

We'll hold our little snug, domestic court,
Plying our work with song and tale between."

Joanna Baillie.

4. "Conversation may be fatiguing from excess of thought. It is still more so from the want of it."—*Dr. Ker.*

5. "It was a miserable thing when the conversation could only be about whether the mutton should be boiled or roasted, and probably a dispute about that."—*Dr. Johnson.*

6. "The reason why few persons are agreeable in conversation is because each thinks more of what he intends to say than of what others are saying, and seldom listens but when he desires to speak."

La Rochefoucauld.

7. "Indeed, we all speak different dialects; one shall be copious and exact, another loose and meagre; but the speech of the ideal talker shall correspond and fit upon the truth of fact . . . and what is the result? . . . (he) can enjoy more of what makes life truly valuable—intimacy with those he loves."

Stevenson.

8. "Conversation is an indulgence to the sociable part of our make."—*Steele.*

Our readers are invited this month to send in quotations from their favourite authors on the subject of Letter-writing. Each quotation to be written legibly on a post-card (only), and no competitor to send more than one. A prize of FIVE SHILLINGS awarded for the best. See rules below.

The "Conversation" prize is awarded to H. E. WALTON, 1 Westcott Terrace, Chesterton, Cambridge.

SIX GREAT VICTORIANS

Second

*Both sham and cant his noble rage
Exposed, in many a written page.*

1. Far from the noisy world of men
Here he sought fame with striving pen.
2. His winged words flew o'er the sea
To the heart of this nation strong and free.
3. Of this time of terror he told the tale
In burning words that never fail.
4. In this is he not crowned with Fame?
On glory's roll inscribe his name.
5. He called on these, and made them strong
To fight for the right and scorn the wrong.
6. Death found him here, his life-work done,
He entered on his rest well-won.
7. Here, in the village of his birth,
Green is his grave in native earth.

Find the hero of the above Acrostic, and the seven required words whose initials spell his name. For the best brief answer in rhyme a prize of HALF-A-GUINEA will be awarded. See rules below.

The Fireside Club

HIDDEN AUTHORS

A prize of ONE GUINEA is offered for the best answers in the series of four authors which begins this month. Answers must be sent in month by month, and one mark will be given for each correct light. The competitor scoring highest will win. See rules below.

First of Four

1. "O ignorant race of man!
... your good who can,
If your own hands the good begun undo?"
2. "Through the thick corn the scarlet poppies
peep,
And round green . . . and yellowing stalks
I see
Pale pink convolvulus in tendrils creep."
3. "Strew on her roses, roses,
And . . . a spray of yew!
In quiet she reposes;
Ah would that I did too!"
4. "What mood of spirit therefore shall we call
The true . . . of a man, what way of life
His fixed condition and perpetual walk?"
5. "Unwillingly the spirit fled away,
Regretting the warm mansion which it . . .
And youth, and bloom, and this delightful
world."
6. "Some sage to whom the world was . . .
And men were specks, and life a play."

The initials of these six missing words spell the name of an author who has been called "our last Greek" and "the high priest of culture." Give the missing words, and the sources of the quotations. See rules below. (The award in previous series will appear in February).

Answer to First of Six Great Victorians (p. 89)

WELLINGTON

In WALMER CASTLE's quiet peace
He spent the evening of his days;
After the toil of war came ease.
And ENGLAND's praise.

When LONDON's noble House of LORDS
Had given the IRON DUKE a seat,
He found its mobs as hard as swords
Of foes, to meet.

The man whom first the NETHERLANDS
Had schooled in war, was made by Spain
A GENERALISSIMO; for his hands
Had loosed their chain.

And he that fought TIPPOO SULTAN
Was crowned with OXFORD's laurel leaves,
When he had crushed NAPOLEON,
Whom France still grieves.

The prize of HALF-A-GUINEA is awarded to WICKIE
M'CREADY, Inniscleeraun, Malone Road, Belfast.

Answers in the foregoing competitions must be received at the "Leisure Hour" office, 56 Paternoster Row, not later than the 20th of the month. They must be addressed to the Editor, each competition in a separate cover, with writer's name and address attached, and marked outside "Fireside Club."

Write very clearly on one side only. No paper can be returned. Private correspondence is quite impossible.

Wives, Mothers, and Maids

TALKS IN COUNCIL

On Earning Pecuniary Independence

WHEN a new chapter is being added to the social history of England, the latter half of the nineteenth century will probably stand out pre-eminent in that it saw, for the first time, the question of woman's education practically considered in this country.

To educate people is to prepare them to perform, to the best of their ability, the work that awaits them at maturity, their environment, temperament, and opportunities being taken into consideration.

To indicate woman's condition as it was a quarter of a century ago, is unnecessary, even for the purpose of emphasising the advantages gained for her in the interval; neither is it essential to mourn before the gates still closed against her, in view of the many which labour and faithful effort have flung open. Woman can now pursue a multitude of honourable

callings where she can not only earn her living, but preserve her individuality and use her personal force of character for the betterment of her race and sex. In many callings over which the ægis of Government spreads dignity women can earn from £80 to £250 per annum.

Essentials of happiness are: first that we shall work, secondly that our work shall be recognised by ourselves and others as valuable. To grow to womanhood without definite anticipations, to drift through maturity without definite achievements, are conditions disastrous to self-respect, and consequently to satisfaction. That many women still lead aimless lives is unfortunate but not inevitable.

To obtain appointments under Government it is necessary that candidates shall be educated according to a prescribed régime, and shall have satisfactorily passed the tests which certain institutions have appointed, but fortunately the cost of such education is not prohibitive, nor is

Wives, Mothers, and Maids

the initial study likely to prove detrimental to health. A girl residing at home can become a qualified and certificated teacher of cookery with a minimum of forty weeks and a maximum of twelve or eighteen months' attendance at the Battersea Polytechnic, the National School of Cookery, Buckingham Palace Road, the Training College for Teachers of Domestic Science, Northfield, Stamford Hill, the Kensington School of Cookery, 153 High Street, Kensington, London, or one of many other establishments in London or the provinces. The educational fee is £30; books, travelling expenses, and other incidentals will somewhat increase the direct outlay. Certificates from these schools are recognised by the Education Department, and teachers are selected from the holders of such certificates. Salaries begin at £60 to £80, and rise by annual increments of £5. Superintendents' salaries begin at £150 and rise to £250 per annum.

Should a qualified cook not obtain a Government appointment, she may still be very successful with private classes, classes in private schools, and the education of young married ladies in domestic management, while qualified cooks who are willing to preside over the cookery department in private houses, on the occasion of lunch or dinner parties, can earn a good if somewhat precarious income. The appointment under Government is at once the most permanent and most satisfactory, and for one of these the candidate should prepare herself not only by intimate knowledge of the prescribed course, but by attention to everything calculated to render her an interesting and informative speaker. Personal appearance, address, and general education are all of distinct advantage to the candidate.

Apart from emolument the cookery teacher has satisfaction in the knowledge that she is doing an absolutely useful work. To understand anything is to love it, more or less, and the child cook who is taught in the Board Schools to select food and to perform with a single shilling the miracle of supplying a wholesome and appetising dinner of three courses for six persons is not likely, when arrived at woman's estate, to develop into an indolent frequenter of the beer-shop. The Board School of the present day is aiming at education in its best sense, that which fits the pupil for the conditions that await her.

I recently visited on the Victoria Embankment an exhibition of the work of Board School children of fourteen years and under, and was astonished and delighted by the evidences of knowledge of dressmaking, laundry, sick-nursing, cooking, and kindred home arts which the exhibits manifested. That a little girl can learn in twenty-two lessons to cook a palatable meal, and to serve it nicely, is a fact which promises to solve in the near future some of the difficulties in the lives of working people. The pupil also learns to make her own pinafore in the sewing-room and to wash it in the laundry,

while the cleaning of her boas, parasols, and kid gloves forms part of the practical equipment.

A knowledge of practical work is a strong bond of union between those who do it and those who merely command or supervise it. A twelve-months' apprenticeship to domestic work, before any girl of whatever rank could be considered educated or certificated as such, could not fail to beneficially serve the entire race.

Perhaps the most surprising part of the exhibition was the section supplied by the blind children, whose dishes looked as dainty as any, and whose loaves were as crisp and shapely. The blind do all their work by touch, reading the receipts in Braille-written books. They are most thorough in their work, the teacher said, and become, with practice, but little less expeditious than their more fortunate sisters who see. If any ladies possessed of leisure would like to assist in producing these Braille books they can learn how to do so by applying to the secretary of the Blind Lending Library, 117 Belsize Road, Hampstead, London, N., or to the Secretary to the Society for the Indigent Blind, Lion Square, London.

ANSWERS TO CORRESPONDENTS

Daisy.—To make chocolate icing, put into a saucepan $\frac{1}{2}$ lb. powdered loaf sugar, 2 oz. grated chocolate, and about 1 gill water. Stir on the fire till the mixture assumes the consistency of a thick smooth cream. Lay the icing evenly on the cake or pastry with a paper or palette knife, and put into the oven for a minute or two to set it.

Mollie.—In making fritters the fat used for cooking them should have passed the bubbling stage, and should have become quite still, with a blue smoke rising from the surface. The bubbles are caused by an admixture of water in the fat; when this evaporates the fat boils without bubbling; prior to this stage the fritters will prove heavy.

H. K.—To make apple snow pare and core six good-sized apples, steam them in two tablespoonfuls of water till quite soft. Add $\frac{3}{4}$ lb. finely sifted white sugar and the white of one quite fresh egg. Beat all well together for three-quarters of an hour and serve as you please. The snow looks well heaped up in custard glasses. Another kind of snow is made with white of egg alone, and is served with mashed apples over which has been spread a layer of boiled rice, the whole being covered with the egg snow, which may be coloured, if desired, with pink sugar or a little cochineal.

VERITY.

Letters requiring answers should be addressed—

"Verity,"

c/o Editor, "Leisure Hour,"

56 Paternoster Row,

London, E.C.

It is desirable that such communications reach the office not later than the 12th of each month when early replies are required.

Our Chess Page

ELEVEN GUINEAS IN PRIZES (for Amateurs only)

PROBLEM-COMPOSING COMPETITION

Six Guineas in Prizes

In fulfilment of our promise made in November, we this month offer prizes for the best original two- and three-move problems under the following

Conditions. For the best three-move problems we offer three guineas and a-half: First prize, two guineas; second, one guinea; third, half a guinea.

For the two-movers we offer two guineas and a-half: First prize, thirty shillings; second, fifteen shillings; third, seven shillings and sixpence.

Problems sent in for competition must be the unaided work of the senders, and must not have been printed or otherwise made public.

Each one must be submitted in diagram form, and must be accompanied by a complete solution, giving all the leading variations, clearly written in any recognised notation.

Both diagram and solution must be on one piece of paper, which must be headed by a *nom de plume* adopted by the competitor.

The name and address of each competitor must be sent in a sealed envelope with the *nom de plume* written outside. These envelopes will not be opened until the award has been made.

The last day for sending in the problems will be March 5.

The adjudication will be made by an experienced problemist, acting in conjunction with the Editor.

Brilliant Games. Five Guineas in Prizes

As December 31 falls on a Sunday, this competition will be kept open until January 2, 1900, and the last day for sending games will be January 9 instead of 7. For conditions see "The Leisure Hour" for November or December 1899.

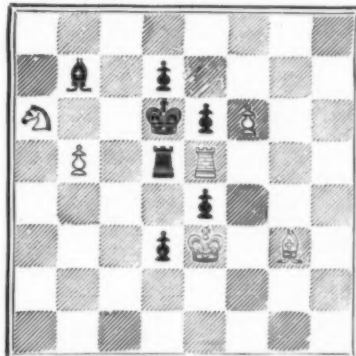
To the chess player who delights in the study of brilliant games, we can cordially recommend Mr. Blackburne's "Games at Chess" (Longmans). The author's reputation for brilliancy and dashing attack is world-wide, and in this fascinating collection of his games we find the work, or perhaps more correctly the *play*, by which it was established.

One part of the book is devoted to endings from actual play, and here the match-playing amateur cannot fail to find much that will be of the greatest use to him. All the openings of any importance are well represented, and the book is complete enough to command the respect as well as the interest of every lover of the game.

Problem-Solving Competition (see November and December parts of "The Leisure Hour"). The final problems are given below. The Solutions of the whole series will be published in the February part, and the Award a month later.

PROBLEM IV., BY H. F. L. MEYER

BLACK—7 men

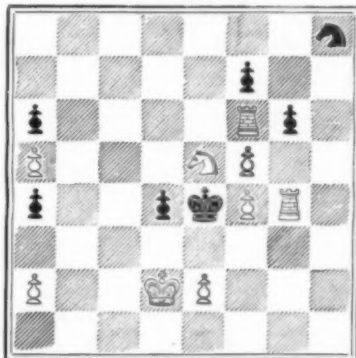


WHITE—6 men.

White to play and mate in three moves.

PROBLEM V., BY E. B. SCHWANN

BLACK—7 men



WHITE—9 men

White to play and mate in four moves.

Solutions to both these problems to be sent in by January 22, 1900.

All communications to be addressed to the Editor, "The Leisure Hour," 56 Paternoster Row, London, E.C., and to be marked CHESS on the envelope.

The Leisure Hour Eisteddfod

RESULTS OF COMPETITIONS

COMPETITION 12

Post-card suggestions as to subjects of articles for the "Leisure Hour."

Prize Five Shillings:

THOMAS BAIRSTOW, Hunsworth Lodge, Gomersal, Leeds.

Very Highly Commended

STEPHEN KIRKWOOD, Bramley, Leeds; — HOWLETT, Hayling Island; ALICE M. PAGE, Richmond, Yorkshire; BENJAMIN REEVE, Bermondsey; "SCOTUS," Colinton, N.B.; EDITH E. DAVIES, Cardiff; B. CLEWS, Birmingham; LUCY A. BENNETT, Falfield, Glos.; WICLIF MCCREADY, Belfast; KATHLEEN KNOX, Belfast; M. J. EVANS, Dunstable; MISS ECKFORD, Kensington; E. M. WILKINSON, Long Sutton; HELEN C. TANCOCK, Little Waltham, Chelmsford; J. H. HARRIS, Helston; MRS. BOSANQUET, Blackheath Park; DAVID J. EVANS, Camberwell.

Highly Commended:

MRS. CATTERMOLLE, EDITH WALKER, F. W. A. FISHER, F. PEACOCK, MISS E. BULLOCK, REV. J. R. WILSON, A. SIMMONDS, J. DAVIES-SMITH, MISS SINGLETON, LUCY H. YATES, N. LANG, A. S. BERRY, MRS. ARMAND CAUMONT.

Honourable Mention:

CHARLES FULLERTON, JAMES HOGG, MISS F. E. WHITE, BERTHA E. B. SEXTY, MISS M. E. PEAKE, E. T. WELLS, DAISY FIELD, RUTH LAWBRANCE, K. A. PARKS, EDWIN WHEELER, RUTH LACEY, CHARLOTTE WINIFRED JAMES, EDITH M. TAYLOR, MRS. K. PARR, OCTAVIA.

We are greatly indebted to the large number of our readers who have favoured us with their suggestions. Several of the subjects suggested have been dealt with in recent numbers of the "Leisure Hour," but many new and interesting topics have been proposed, which we hope to treat in our pages from time to time.

COMPETITION 13

The best post-card suggestion for a Christmas present to a husband or wife, not to cost more than five shillings.

Prize Half-a-Crown:

— HOWLETT, Claremont, Gable Head, Hayling Island.

Highly Commended:

MISS B. CLEWS, H. P. BAYNE, JAMES HOGG, MISS WALKER, ANNA SETON-HARPER, HELEN C. TANCOCK, KATIE MERCHANT, H. MARY KRAUSS, N. B. O'BRIEN, HARRY BANNISTER, E. M. BARTLETT, L. BRINDLEY, MRS. CATTERMOLLE, MISS PRIOR, ROBERT LAURIE.

Some of the presents suggested are as follows:

For Husband.—A leather case for carrying letters, cards, tickets, etc., in a coat pocket; a knitted tie (perhaps in his club colours); A Bible; "Sesame and Lilies" (by Ruskin); smoking-cap; small crimson plush case containing miniature photographs of his father and mother; hand-knitted stockings or socks from the "Meath Home Industries," Randlestown, Navan, Ireland; fountain pen; gloves; sandwich tin; a cushion (blue art linen, crest or monogram of red Turkey twill pasted on); crimson morocco leather case to hold stationery, tipped at corners with silver, leather lined.

For Wife.—A haberdashery cabinet, such as may be bought at shops; a newspaper cutting book (for recipes, notes on housekeeping and health, and a thousand and one things that she says she "must remember"); a postal order for five shillings; a writing board (made by husband in his spare time, by covering a drawing-board with cloth, fastening on an inkpot and blotter, and adding cloth pockets for paper, envelopes, etc.); work-basket; "Essence sweet of favourite flower"; a teapot cosy; three good songs.

COMPETITION 14

The most varied and appropriate *menu* for a Christmas dinner for twelve persons, within a cost of £2.

Prize Half-a-Guinea:

MRS. R. SIMONS, 178 Highbury New Park, London, N.

Very Highly Commended:

MISS O. V. COOKE, The Haye, Burnaby Road, Bournemouth West; MISS LUCY H. YATES, Woodbank, Woodville Road, New Barnet, N.; LILIAN EVAN SPICER, Belair, Dulwich, S.E.; MISS DUNN, Ardstraw, Newtownstewart, co. Tyrone; M. R. WAY, Aston Sandford, Thame; C. M. SUTHERY, 61 Leigh Road, Highbury, London, N.

Highly Commended:

GERTRUDE COLMAN, Peterboro; ETHEL M. BARTLETT, Westerham; E. POTTERTON, Kingstown, Ireland; ELSIE SIMMONS, Southampton.

The Leisure Hour Eisteddfod

Honourable Mention:

CHARITY PLUNKETT DAWSON; D. GISBY; A. GROVE;
B. CLEWS; RUTH LACEY; IRENE MCCREADY; S. E.
BIGGS; S. T. POSTLE; A. BODSWORTH; D. GROVE;
MISS GODFREY; M. GIBBINGS; E. GIBBINGS; N.
DOUGLAS.

The Christmas dinner for 1899 has already been eaten by the majority of our readers before this number reaches them. But the festivities will not yet be quite over, and the *menu* for twelve persons will be useful some time. We therefore append two of the best.

SOUP	£	s.	d.
Mock turtle (thick)		2	0
Vermicelli (clear)		1	6

FISH	£	s.	d.
Cod à la Maître d'hôtel		1	0
Filleted soles (anchovy sauce)		2	0

ENTREES	£	s.	d.
Kidneys à la française		1	6
Oyster patties		2	0

SECOND COURSE	£	s.	d.
Roast turkey		10	0
Sausages and bread sauce		1	6
Sirloin of beef, horse-radish sauce		6	6
Potatoes, cauliflowers, Brussels sprouts		1	6

THIRD COURSE	£	s.	d.
Christmas pudding		3	6
Mince pies		1	6
Charlotte Russe		1	6
Lemon jelly			6
Ice pudding		1	6

SCANDRIES	£	s.	d.
Dessert		2	0
Total		2	0

	£	s.	d.
Hare soup (Lazenby's tinned)		3	6

ENTREES	£	s.	d.
Fish pâtés		1	6
Lapin aux beignets à l'anglaise with Maître d'hôtel sauce		1	6

BOILED	£	s.	d.
Turkey		11	6
Forcement and white sauce		1	2

ROAST	£	s.	d.
Sirloin beef		8	0

VEGETABLES	£	s.	d.
Potatoes			6
Celery		1	0
Bread			3
Horse-radish			3

SWEETS	£	s.	d.
Plum pudding		3	0
Mince pies		1	6
Diplomatic mould		2	0
Cheese straws			6

DESSERT	£	s.	d.
Oranges			6
Dates			6
Almonds and raisins		10	
Walnuts			6

BON-BONS	£	s.	d.
Crystallised fruit ($\frac{1}{2}$ lb.)			8
Chocolates ($\frac{1}{2}$ lb.)			8
Total		1	19

COMPETITION 15

Post-card suggestions for family Christmas games.

Prize Five Shillings:

MRS. K. PARR, Girls' Industrial School, Sale.

Highly Commended:

DAISY FIELD, Tottenham; ROBERT LAURIE, New Wandsworth; KATIE MERCHANT, Manchester; F. M. RAMSAY, Cheltenham; MARGARET HOWE, Tottenham; MISS WALKER, Kildare; COLONEL MITCHELL, Battersea Park; MRS. BOSANQUET, Blackheath; E. M. HARRIS, High Wycombe; L. M. BARBER, Brixton.

We are glad to see that the old favourite games are not forgotten. Long may they continue! But our prize was intended to elicit some new or little-known games. We select three from many good ones.

1. *Musical Proverbs or Quotations.*—Two persons must be in the secret, and one of them must be able to play chords on the piano. The other goes outside the room, and the company choose a well-known proverb or quotation (preferably the latter, as it creates more surprise). The guesser is then called in and the colleague at the piano plays out the quotation according to the following: Count one letter of the alphabet for every chord played (e.g. six chords would be r). If, however, the letter should be a vowel, single notes are played (e.g. one note for a, two for e, three for i, etc.). A little practice (with a good pianist and a quick-witted colleague) makes this a most mysterious game, as even after one word is spelt out on the piano a cue is obtained by the guesser.

2. *Tea-Party.*—No. 1 player begins by saying, "I am going to have a tea-party, and invite so and so" (naming some well-known person). Nos. 2, 3, etc., repeat the same in turn, each inviting the guests of all the previous players, and one of his own. In this way the game can go round and round until twenty, thirty, or more famous persons have been invited; the fun consisting of remembering the whole string of names. If a player fails to remember one, he must sit on the floor and be out.

The Leisure Hour Eisteddfod

3. *Sketching Game*.—Each player takes a scene or article, well known to all, and portrays it on paper; then at end of page writes what it is meant to represent; that part is folded up and passed in turn to the others, who each write their impression of it. All papers are then collected, the sketches shown and the various opinions read out, causing great fun.

Other good games, which space does not permit describing, are "Verbarium" (a spelling game), "Parish Priest," "It," "Judge and Jury," "Mewing Buff," "Birds Fly," "Imitation," "Noses," "Blowing out Candle Blindfolded," shouting proverbs and singing proverbs, etc. etc.

COMPETITION 16

Programme for evening school treat.

a. Programme for Infants

Prize Half-a-Guinea:

JOY WILLARD, 46 Minch Avenue, Harlesden West.

Very Highly Commended:

IRENE MCCREADY, Malone Road, Belfast.

Commended:

STEPHEN KIRKWOOD, Leeds; AGNES LUSLEY, Sheffield.

b. Programme for Children under Twelve

Prize Half-a-Guinea:

EDITH F. THOMAS, 61 Mansel Terrace, Swansea.

Highly Commended:

STEPHEN KIRKWOOD, Bramley, Leeds.

c. Programme for Senior Scholars

Prize Half-a-Guinea:

KATIE MERCHANT, Manchester.

Highly Commended:

J. H. HARRIS, Helston, Cornwall; STEPHEN KIRKWOOD, Leeds.

We append the senior scholars' prize programme for an evening party.

1. Start with something lively, such as "Musical chairs."
2. A song.
3. Divide into groups and play "Throw the handkerchief."
4. Clumps.
5. A recitation.
6. A song.
7. Jolly Miller.
8. Subject and object.
9. Interval for fruit—apples, oranges and grapes.
10. Divide again into groups and have kitchen furniture.
11. A song.
12. A charade.
13. Bring in a clothes-basket, if possible, hang it between two chairs on a broom-handle or stick, let a gentleman sit in and try to knock a penny off each corner of the chair with a stick.
14. Post is passing.
15. A recitation or reading.
16. Let a few act the title of several books or songs.
17. Have a basin with a spoon in it. Take the spoon and touch some one, then run back to your place. If they can take the spoon and hit you before reaching it you must be down again, but they must first dip the spoon into the basin.
18. Cover five or six persons all over with newspapers except their eyes. Let the company guess who they are.
19. Coffee, tea, and assorted biscuits or cakes.

COMPETITION 17

We hope to announce the result in our next number.

PRIZE ESSAYS FOR TEACHERS

18. We offer two prizes of **One Guinea each** (one for teachers of boys' schools, the other for teachers of girls' schools) for the best essay, not exceeding 1,500 words, on

TROUBLESOME PUPILS AND HOW I DEALT WITH THEM

RULES

1. Every competitor must cut out the *Eisteddfod* ticket given on p. 13 of advertisements, write on it

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the number of competition, and fasten the ticket to the outside of the envelope containing his or her essay.

2. Essays must be written on foolscap paper, one side only. A *nom de plume* may be used, if preferred.

3. All competitions must be addressed to the Editor of the "Leisure Hour," 56 Paternoster Row, London, E.C., not later than January 22, 1900.

4. No essay or other contribution will be returned, even if stamps are sent.

